– LATIN AMERICA@WAR 40 –

DECADES OF REBELLION

VOLUME 1: MEXICAN MILITARY AVIATION IN THE REBELLIONS OF THE 1920s

SANTIAGO FLORES & M REYNA-GARZA

LATIN AMERICA @ WAR SERIES

Helion & Company Limited
Unit 8 Amherst Business Centre
Budbrooke Road
Warwick
CV34 5WE
England
Tel. 01926 499 619
Email: info@helion.co.uk
Website: www.helion.co.uk
Twitter: @helionbooks
Visit our blog http://blog.helion.co.uk/

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Cover artwork: On 21 March 1924, the DH.4B serial number 8, assigned to the Military Aviation Service piloted by *Mayor* Pablo L. Sidar, with Alfredo Lezama as gunner and observer, attacked the armoured cruiser *Zaragoza* as it was anchored in the Coatzacoalcos River, in the port of Veracruz. The aircraft dropped four bombs, one of which hit the tug vessel *Hercules*, near *Zaragoza*. (Artwork by Renato Dalmaso © Helion & Company 2024))

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We always welcome receiving book proposals from prospective authors.

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THE FALKLAND ISLANDS

ABBREVIATIONS AND ACRONYMS

Capitán 1/o	Captain 1st Class (military commissioned officer rank)
Capitán 2/o	Captain 2nd Class (military commissioned officer rank)
Coronel	Colonel (military commissioned officer rank)
CROM	*Confederación Regional Obrera Mexicana* Regional Confederation of Mexican Workers
General	General (military commissioned officer rank)
MAS	Military Aviation Service (of Mexico)
Mayor	Major (military commissioned officer rank)
P.A.	*Piloto Aviador* (pilot aviator)
Subteniente	2nd Lieutenant (military commissioned officer rank)
Teniente	Lieutenant (military commissioned officer rank)
Teniente Coronel	Lieutenant Colonel
TNCA	*Talleres Nacionales de Construcciones Aeronáuticas* (National Workshop of Aeronautical Construction)
USA	United States of America
USAS	United States Air Service

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While every effort has been made to correctly render the names of people and places in their commonly accepted English-language forms these are not always consistent in the original sources. We therefore apologise for any related errors occurring.

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Finally, to my family that had to put up (again) with all the travel (again), telephone calls (again), researching and time on the computer, but in the end, I got their support to carry on.

Love ya guys,
Santiago A Flores

INTRODUCTION

A lot has been published on the history of the Mexican Air Force in the Spanish language, covering its establishment, the challenges it faced, its successes and changes through the years. However, there is a short period of time that has not been fully covered or has been passed over by many researchers and historians: the period from the 1920s to the 1940s. Moreover, some confusion exits due to the events that happened during these decades, and there are several different versions about specific affairs. Even official government publications and websites rarely mention the period between 1920 and 1940 – and particularly the times when the Military Aviation Service proved unable to protect the established government of Venustiano Carranza. Notably, even the Operations Diary of the Military Aviation School, published in 1925, goes up to 30 December 1919, but then skips over to 20 April 1920, and then again to 31 May 1920: seemingly, even the first crash of a Farman F.50Bn2 bomber in Mexico City was more important than a full-scale rebellion with the removal of the government![1]

Correspondingly, this study focuses on reconstructing the operational history of Mexican military aviation between the 1920s and early 1940s, based on whatever related documentation could be found by the authors.

President Don Venustiano Carranza, who tried to take Mexico out of the grip of military officers but failed to gauge the popular support for generals like Obregón. In May 1920, this cost him his government and life. (Authors' collection)

1

THE FALL OF CARRANZA, MAY 1920

The beginning of the period covered in this study falls within the Mexican Revolution: usually described as lasting from 1910 until 1920, this was a time of major political upheaval, a terrible civil war, and a series of armed rebellions. Originally sparked by the unpopularity of the 31-year-long rule of *General* José de la Cruz Porfirio Diaz Mori (and his failure to find a controlled solution to the issue of presidential succession), the Mexican Revolution transformed into an all-out power struggle between competing elites, which in turn provoked an insurrection of farmers and workers. The conflict broke out in November 1910 in northern Mexico and was initially led by the wealthy landowner Francisco I. Madero, in cooperation with other revolutionary leaders like Pascual Orozco and Francisco 'Pancho' Villa, a bandit. Supported by large segments of the middle class, the peasantry, and organised labour, the military campaign run by the *Maderista* forces secured Ciudad Juárez, in May 1911, and then forced Diaz out of office and into exile. New elections were set up in October 1911, and Madero won with an overwhelming vote. However, the conservatives saw the new president as 'too weak' and 'too liberal', and – in cooperation with foreign governments, influential businessmen, former revolutionary fighters and the dispossessed – many of whom considered Madero to be 'too conservative' – some launched an armed insurrection. The result was a chaotic period in February 1913 in the capital – known as the Ten Tragic Days – during which the President and his Vice President, José Maria Pino Suárez were forced to resign, assassinated, and replaced by a counter-revolutionary government of *General* José Victoriano Huerta Marquez, backed by the United States of America (USA). Led by Don Venustiano Carranza, Pancho Villa and Álvaro Obregón with the now Constitutionalist Army, reinforced by farmers led by Emiliano Zapata (who successively opposed all the governments in Mexico City), forced Huerta out. However, he was replaced by another wealthy landowner, Carranza, who was opposed by many: when a political agreement about the reform failed in 1914, the Federal Army dissolved, and Mexico plunged into a civil war. Eventually, forces loyal to Carranza and commanded by Obregón – designated the Mexican Constitutionalist Army – managed to defeat the Conventionists Army of Pancho Villa and Emiliano Zapata in 1915, forcing the survivors to return to guerrilla warfare in Morelos, and Pancho Villa into the north after 1916.

According to various estimates, the bloody war of 1914–1915 led up to 10 percent of the Mexican population of 15 million being killed, over 200,000 to flee abroad, and the economy was not to recover for more than 20 years. Moreover, this conflict brought only a short respite. Early on, Carranza was cautious and thus went to some extent to keep Mexico neutral in the First World War: he spoiled German attempts to draw the country into conflict with the USA, but also resisted American and British efforts to sway Mexico to their side. Meanwhile, he sought to take the country away from military strongmen like Obregón, Plutarco Elías Calles, Cárdenas, Gonzales, and others, and – although a civilian – gradually managed either to neutralise or have assassinated most of his major political opponents. Simultaneously, he pushed for the rights of women and gained their widespread support. Where Carranza ultimately failed was the issue of the much-demanded land reform: promulgated on liberal and revolutionary principles, the Mexican Constitution of

1917 was written not only by him, but by numerous revolutionaries more radical than the president: as soon as he was confirmed as president during the elections of the same year, Carranza took steps to prevent the constitution's most important aims, foremost agrarian reform. Instead, he deployed the armed forces to repress the revolting peasants and vetoed even laws that could have increased agricultural production by granting farmers temporary access to lands not under cultivation. On the other hand, when the hacienda owners in the south-east took up arms, Carranza sent his most radical supporters – Francisco Múgica and Salvador Alvarado – to mobilise peasants as a counterweight. Overall, the president sought to consolidate his position through enhancing the power of the central state; through setting new nationalist, social, and economic goals for the country; and through curtailing the power of foreign interests. Gradually, the Mexican state thus managed to assert dominion over most of the nation's territory and resources. However, in turn the president managed to alienate a conglomerate of powerful enemies.

Plan de Agua Prieta

The anti-Carranza plot, known as the *Plan de Agua Prieta*, came into being rather gradually. Its origins can be traced back to the assassination of Emiliano Zapata on 10 April 1919, organised by *General* Pablo González and his aides, on behalf of Carranza, and the flight of *General* Álvaro Obregón Salido, from Mexico City to the northern state of Sonora, after he declared his candidacy for president, where he attracted support from lawyer Adolfo de la Huerta and *General* Plutarco Elías Calles, and the Regional Confederation of Mexican Workers (Confederación Regional Obrera Mexicana, CROM). Together with others from the region of Sonoran – Plutarco Elías Calles and lawyer Adolfo de la Huerta – elements of the military, and with wholehearted support of CROM, they launched an advance on Mexico City on 11 April 1920.

Over the following month, Obregón's forces – led by *Generals* Calles and Angel Flores – were reinforced by revolutionaries from the states of Michoacán, Sinaloa, Hidalgo, Oaxaca, Zacatecas, Nuevo León, San Luis Potosi, Nayarit, Puebla, Chiapas, Jalisco, and Tabasco. Indeed, among those signing this plan were several future presidents of Mexico, and one officer who would later oversee the Military Aviation Service. The rebel leaders, after hearing about the role of aviation in the last world war, took great care to obtain aircraft. Amongst others, De la Huerta had a chance encounter with former 1st Lieutenant Ralph O'Neill of the US Air Service (USAS). Born in Durango, Mexico, to an Irish-American father and Mexican mother, O'Neill was one of the notable pilots of the 147th Aero Squadron in France in 1918. He had been released from military service in February 1919, and returned to Arizona to continue his work in mining. About his meeting with De la Huerta and his attempts to recruit him for the rebellion against Carranza, O'Neill wrote:

> While in Arizona on engineering work for Hercules, I attended a reception at which another honoured guest turned out to be Governor Adolfo de la Huerta of Sonora, Mexico, who now was the active leader of the revolution against the Carranza government in Mexico City. We chatted and he seemed to know all about my war record. He asked me to visit him very soon at his capital in Hermosillo, and when I did, he amazed me by offering me $50,000 to set up a small fighter plane unit – with some of my former squadron mates recruited to do the flying – to assure the success of his revolution.
>
> I am sorry Governor, I said. I am not a mercenary. I will not fight your war for money, and I doubt that any of my friends would be interested. De la Huerta sat silently for a time; his hands flat on the big desk between us. There might be even greater rewards later he observed. Later when the war is won. Governor, I will tell you what is now running through my mind. You know, just as an air force would ensure the success of your revolution, so it continued existence would guarantee the failure of any later rebellion.

One of the leaders of the *Plan de Agua Prieta*, and another future president of Mexico, *General* Plutarco Elías Calles. (Authors' collection)

Capitán 1o. Piloto Roberto Diez Martinez. Jefe de la Flotilla

The leader of the *Obregónista* faction within the Military Aviation Service (MAS) was *Capitán 1/o P.A.* (*Piloto Aviador*) Roberto Diez Martínez, who seized the Aviation School and workshops. (*Revista Tohtli*)

Mexico's first military pilot – and one of the pilots who made it to the presidential trains leaving Mexico City (reportedly in a TNCA Serie B) was *Teniente P.A.* Samuel C Rojas. He flew with mechanic Medardo Cordoba Torres in the rear cockpit. (*Archivo General de la Nacion*)

Former Lieutenant of the USAS, Ralph O'Neil, who would come to Mexico in May 1920, after his meeting with Governor Adolfo de la Huerta, who tried to recruit him to fight on the rebel side. (Authors' collection)

The third member of the 'Sonora Group' was the contemporary governor of this state: Adolfo de la Huerta. He went on to try hiring Ralph O'Neil to fight on their side and served as provisional president until the end of 1920. (Authors' collection)

> He raised his dark brows, So, after your revolution has succeeded – which I believe it will – and you have become President, then there will be no more important program than for you to establish a Mexican Air Force, independent of the army and all other groups who might affect the security of your government. If at the time you are so minded, I will come to Mexico City and establish and independent air force for you, composed entirely of native Mexicans.

As time was to show, O'Neill would have significant impact on the development of Mexican military aviation later down the road.

Military Aviation Service

These political passions, intrigues, and divisions not only affected the Army, but also the air service. As later mentioned by witnesses, there were pilots and ground personnel who favoured Obregón over Ignacio Bonillas, that would affect the performance of the air service, to the point of sabotage of aircraft. These events would also show the weaknesses of the air service at this critical time.

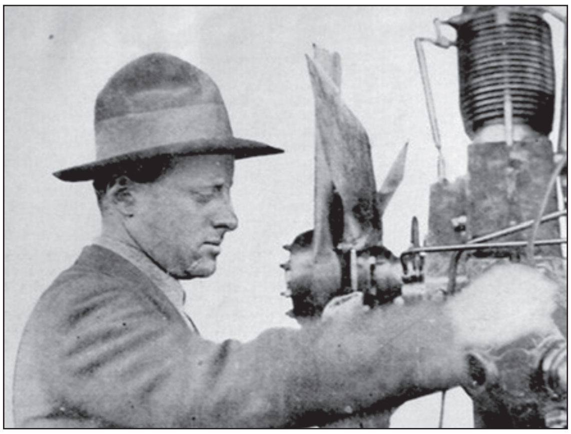
As of 1919–1920, the Military Aviation Service of Mexico consisted of the Military Aviation School and the National Aeronautical Construction Workshops (*Talleres Nacionales de Construcciones Aeronauticas*, TNCA) – of which the latter were assembling and building aircraft for the service, as available and necessary. Due to strained relations with the United States and the war in Europe, Mexico was forced to design, build, and modify its aircraft on its own, and even had to build its own power plants and propellers. Later on, an attempt was made to sell some of its products on the civilian market, and to other Latin American countries – including Bolivia and Chile – but with no success: at the time, there was a surplus of aircraft left from the First World War on the market, and they were very cheap to purchase. Francisco Santarini had even developed and built a ten-cylinder radial engine with an output of 130 horsepower (named 'SS-Mexico', short for Salinas-Santarini-Mexico), and it was test-flown on 26 May 1919. Furthermore, some locally-manufactured propellers – named 'Anahuacs' – were exported to Argentina and Japan.

The organisation of the air service is best described in the following military intelligence report dated 1 August 1919:

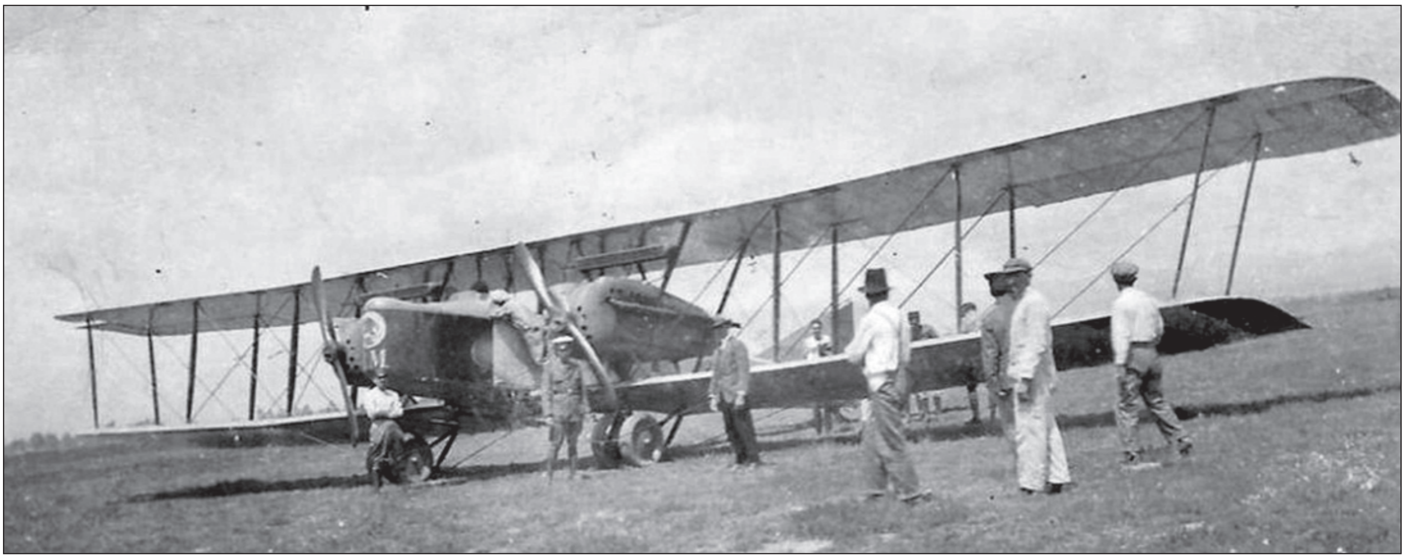
> The organization for war is loose. The national chief of staff instructs the theoretical director of the school and shops and orders the aviators and planes in varying numbers to desired locations. There seems to be no chief of aviation for operations, although the formation of an aviation corps was announced 5 October 1918, with divisions of five squadrons, each composed of five fliers. There is no fixed scheme, distribution depending upon circumstances constantly varying, except that aviation activities naturally centred at their school at Balbuena field, Mexico City.

Salinas' Shopping-Spree in Europe

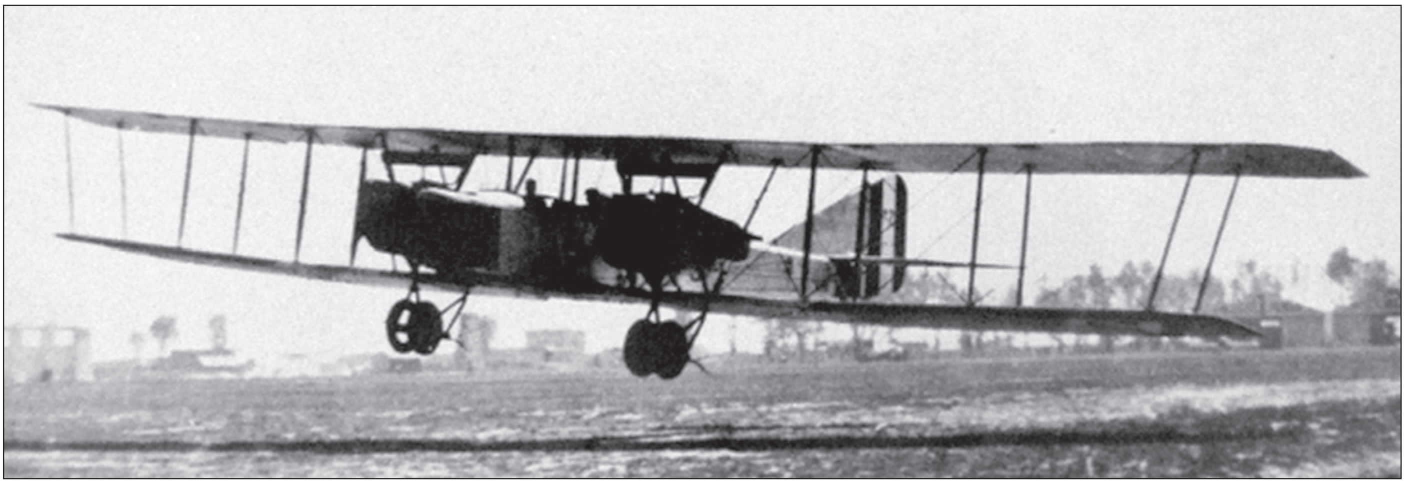
As of 1919, *Coronel* Alberto Salinas Carranza – the founder of the Military Aviation School and the TNCA Workshops in November 1915 – oversaw all the military industries of Mexico. Correspondingly, President Carranza – his uncle – sent him to Europe to acquire aircraft, engines, and ammunition. Accompanied by chief mechanic Maestro Francisco Santarini Tognoli, they visited France, Belgium, and Italy, but were not allowed to visit Great Britain, as noted in the in a US intelligence report dated with 9 October 1919:



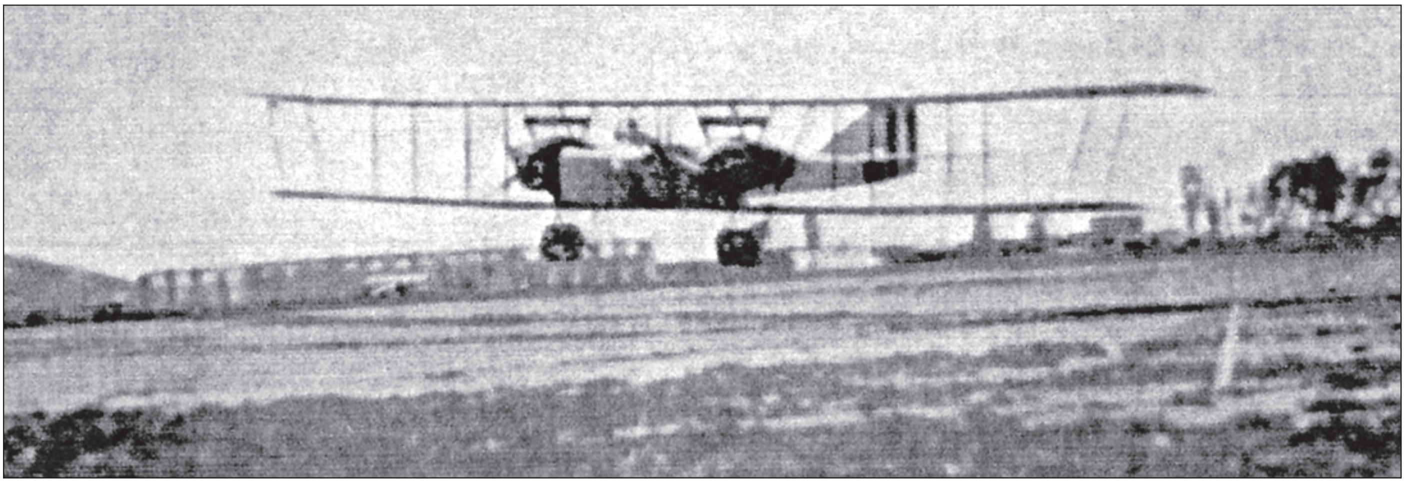
The Italian mechanic Francisco Santarini, who not only designed and built aircraft and engines at the TNCA, but also helped train pilots – although he was not a flier. He continued to serve in the workshops after May 1920. (*Revista Tohtli*)



One of the two Farman F.50bn2 twin-engine bombers assembled in Mexico. Notably, this example had the bomb racks installed. Named *RM Republica Mexicana*, it was lost in Zacatecas in July 1920. (Ing. Enrique Velasco Collection)



Another Farman F.50Bn2 taking off from Balbuena Airfield, probably after the events of 1920. (Ing. Enrique Velasco Collection)



A Farman bomber underway at a very low altitude over Balbuena Airfield – probably in 1920 – and most likely in the colours as applied on the first two aircraft of this type to reach Mexico in April of the same year. (Pablo Larumbe Collection)

Salinas, accompanied by Francisco Santarini, sailed from New York on the steamship *Lorraine*, August 30th for Bordeaux. British officials in this country refuse the visa to his passport, because it was diplomatic passport issued in New York which is considered irregular. When asked by the British, why he wanted to go to England, he stated that he wished to go there for about ten days, for the purpose of purchasing about thirty aero planes and ammunitions. He stated that he had not bought them in this country because the United States government would not sell them to him. After some delay, the French vised his passport. Salinas left as his mailing address 115 Broadway, New York, c/o. W.A. Staats.

At the end of the same report, there was mention that Salinas and Santarini got their visas to visit Great Britain while in Brussels, Belgium, but not whether they ever made that trip. Nevertheless,

Coronel Alberto Salinas Carranza, founder of the Military Aviation Service. He supported his uncle, President Carranza, until the President's death in May 1920. (Smithsonian Institution)

Capitán Ing. Juan Guillermo Villasana, who was ordered by *Coronel* Alberto Salinas Carranza to destroy any aeronautical equipment left behind in Mexico City – to deny it to the rebels – but did not carry out the order. (*Revista Tohtli*)

DUPONT, LÉOPOLD-F.
(cit.,),
serg. pilote à l'escadrille C. 46.

Coronel Salinas contracted the veteran pilot Leopold F. Dupont to serve as instructor for Farman F.50Bn2 bombers. He arrived in Mexico after the events of May 1920, but was killed in a flying accident on the last day of the same month. (Authors' collection)

while touring Europe, they managed to acquire several Farman F.50Bn2 twin-engine bombers from the *Societe Des Motaurs Salmson*: the first two (No. 6658 and 6671) for FF180,000, on 10 October 1919. Six workers were hired to disassemble the bombers at the airfield of Saint Cyr, supervised by two veteran French fliers from the First World War, and the Italian mechanic Anibal Paioncini, and they were then shipped to Mexico in early 1920.

Meanwhile, during his visit to Italy, on 29 December 1919 Santarini purchased one Ansaldo Balilla A.1 fighter and one Ansaldo A.5 (for a total of ITL114,000) from the *Societa Anomima Per Construziono Aeronautica Ing. O. Pomillo & CV*. These two arrived in Mexico after May 1920. The primary reason for the acquisition of these three aircraft was foremost their simplicity: together with their engines, they were planned to be built under licence in Mexico at the TNCA workshops.

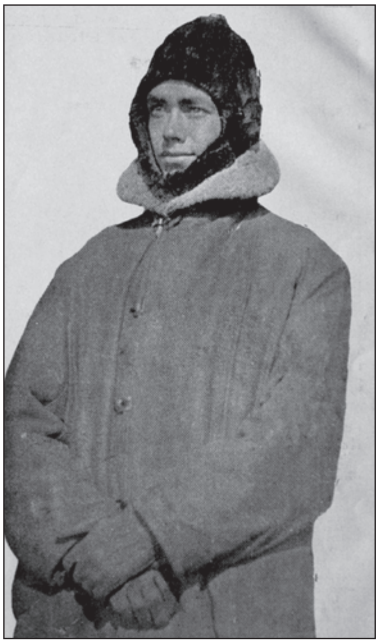
Ironically, while all the details about these purchases became known to US intelligence, nothing is known about possible acquisition of armament for the aircraft – although the first photographs of the Farmans following their assembly in Mexico showed each of them with two bomb racks under the fuselage. Whether these and the bombs for them were made in Mexico, remains unclear: the only detail known is that their bomb sights originated from Germany.[1]

In addition to aircraft, Santarini also purchased several French-made Salmson radial engines, and spares for them – all from the *Societe des Moteurs Salmson* and hired the services of the veteran pilot Leopold Dupont to act as test pilot for the Farman bombers, and the Italian mechanic Piaoncini.[2]

However, wild rumours about the status of both the Military Aviation and the TNCA were meanwhile making circles in Mexico. Supposedly, following the death of four pilots due to the poor state of the flying equipment – reported in the national press – the president shut down the Military Aviation School. US intelligence added its own rumours and, for example, on 18 August 1919, it reported:

> It is known that Col. Alberto Salinas, in charge of the Department of Factory establishment, industrial and military, has acquired some excellent airplanes from our neighbouring republic on the north, where he is present enjoying the leave of absence granted him by the president of the republic. It is certain that with the machines which Col. Salinas will bring back from the United States, the national school of aviation can be reopened.

This report contained several errors, starting with the fact that Salinas did not buy any aircraft from the United States, but only from France and Italy. Foremost, while three pilots were killed in accidents by August 1919 one of them had died in a motorcycling accident in Mexico City. Moreover, the Department of War and Navy quickly reacted to the spate of accidents that had taken place, both at the school and in field units. On 25 March 1919, it appointed *Capitán* Benjamin Becerril – former ground instructor – as the director of the school, and *Capitán* Juan Guillermo Villasana in charge of the TNCA. Certainly enough, the Military Aviation School was closed from June until July 1919, but for economic reasons: the available ground personnel continued maintaining its installations and aircraft. Finally, the organisation of the Military Aviation was actually very flexible. Contrary to what other air forces were doing, between 1918 and January 1920, the Mexicans tended to organise their aircraft and pilots into units of four – usually termed 'flights' (*Flotillas Aereas*) or 'operational flights' (*Escuadrilla de Operaciones en Campana*) in official documentation: these were deployed around



Army *Capitán* Benjamin Becerril was one of the instructors at the Aviation School in 1919. Although not a pilot, he went on to serve as its director, from March 1919 to April 1920, and was still in charge at the time of its evacuation on 6 May 1920. (*Revista Tohtli*)

the country as necessary, though predominantly to fight various rebel groups. These units flew a miscellany of TNCA-built Serie A biplanes and Serie H Parasols, and some experimental types.[3]

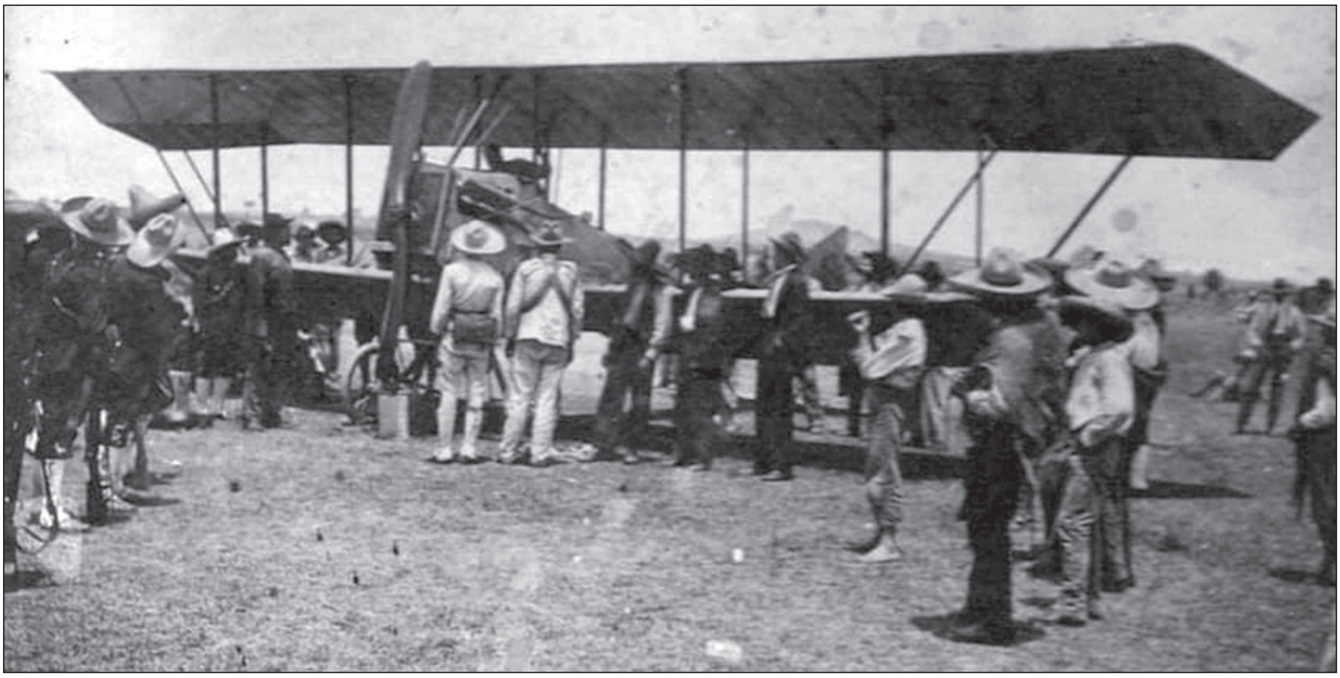
Additionally, several of the flights received incomplete aircraft which were primarily used as sources of spares. Thus, Mexico's military aviation was actually in at least a reasonably good – even if fluid – condition. It included a total of 42 pilots, 38 of whom were available, while four were undergoing training in Italy. Pilots and aircraft available in 1919–1920 were as follows:

- 30 aircraft dropped from inventory due to various causes since 1915
- 13 aircraft in field operations in different parts of the country
- 10 aircraft under repair at the workshops
- 14 pilots in field operations
- Four pilots studying overseas
- One pilot on unlimited leave
- 18 pilots on the service rolls
- 14 pilot cadets
- 35 candidates

TNCA Serie A[4]

The TNCA Serie A biplane was a multi-purpose aircraft designed by Maestro Francisco Santarini, deployed as trainer, bomber, and for reconnaissance purposes. Depending on the source, up to 60 were manufactured by *Talleres Nacionales de Construcciones Aeronáuticas* (TNCA), and it served with the Mexican Military Aviation Service from 1916 until 1921. It was powered by very different engines, depending on availability, including the Aztlalt (80hp) and Hispano Suiza 8V (150hp). The TNCA Serie A biplanes known to have been powered by the Hispano Suiza 8V engines also had extensions on their upper wings, modifications in the cockpit area, and refined, separate cockpits. Those known to have received such modifications were:

- 6-A-19 (built 1917, probably modified in 1919)
- 35-A-50 (built 1919)
- 36-A-51 (built 1919)
- 37-A-52 (built 1919)
- 38-A?? (built 1919)



This recently rediscovered photograph shows a TNCA Serie A biplane equipped with the Hispano Suiza engine and wearing the inscription *APIZACO TLAXCALA*. Its serial was 37-A-52, and some researchers believe that this was one of the three aircraft that took off to defend Carranza's train convoys on 5 August 1920. (Tachi Álvarez Collection)

Peacetime Routine

The airmen flew in support of government troops fighting rebel factions and bandits. They also delivered messages to far-flung units, carried out reconnaissance missions, and bombed rebel concentrations, and had to deal with the commanders of ground forces who did not understand the value of having aviation assets at their disposal. If they suffered losses, then it was because of the high operational tempo. In a particularly tragic example: *Teniente* José E. Rivera and his mechanic, Enrique Pizana, were captured and later executed by *Villistas* – followers of *General* Pancho Villa – while trying to recover a downed TNCA Serie A biplane from the 4/o Flotilla, in November 1919.

All of this was carefully monitored by the USA. The United States Air Service deployed its de Havilland DH.4A and DH.4Bs (all US-made) to fly border patrols, and – time and again – American crews came down on the Mexican side.[5] Several were captured by bandits, only to be released through negotiations with the Mexican Army. In another case, on 13 September 1919 Mexican aviation personnel recovered a downed DH.4: while this was then moved to Chihuahua, on 27 August 1919, *Teniente* José Cervantes, flying a TNCA Serie H Parasol flew a reconnaissance sortie searching for the group of bandits that took away the American crew. Difficulties experienced by the personnel were described in several letters by *Capitán 1/o* Roberto Diez Martínez to *Coronel* Salinas from that period: he complained about shortages of spare parts, the need for better engines, the lack of support from ground commanders, and even the lack of hangars and other forms of shelter for the aircraft. In several messages he requested higher-rated Hispano Suiza engines necessary for operations in the north of the country.

Working up for the Inevitable

In late 1919, all the field units were ordered back to Balbuena Airfield outside Mexico City: following a letter from one of the flight commanders, however, one was held at the field at Ciudad Camargo until 12 January 1920. The same was true for aircraft acquired in Europe: for example, the first two Farman F.50Bn.2s had been packed into 10 crates and transported by the Dutch ship SS *Zuiderrmeijl* to Veracruz. Much to the dismay of their crews, on their arrival in that port, on 10 April 1920, substantial damage was found to six of the crates, all caused by a storm. Because the cargo had been insured before it left France, the Mexican government successfully claimed reparations. However, Santarini was left with little choice but to use the two damaged Farmans to 'build' one. This task was assigned to the mechanic Medardo Córdova Torres, who left behind several written accounts, including the book *Historia de la Iniciacion de la Fuerza Aerea Mexicana* (*The History of the Beginning of the Mexican Air Force*) published in 1962. He wrote:

> In the workshops there was no break from activity because some aircraft had arrived from Europe. They had been purchased by Chief Santarini who had been commissioned for the task. The aircraft were built by Farman of Paris and equipped with two water-cooled 275 hp V-form cylinders. During the Great War, the French had used this type as a bomber. Several Salmson radial engines had been brought over as well. The Farman aircraft had arrived destroyed; wings, fuselage, rudders, everything was in small pieces except for the engines that had been packed separately. All this made repairs difficult, but not impossible. Preference was given to rebuild one of the bombers. The workers, made an exact copy of the big aircraft, and at the end of April 1920 it was taken to Balbuena Airfield to be test flown.

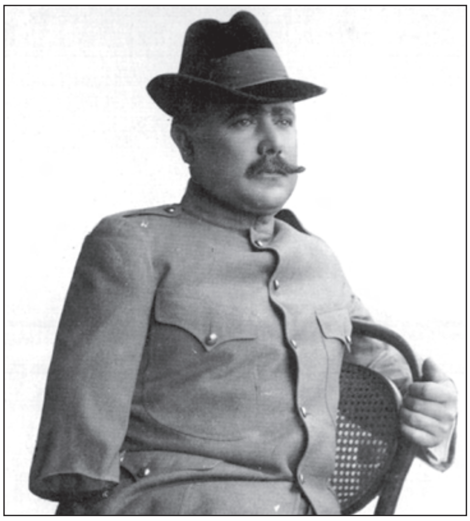
One participant of the events of May 1920, who has left a written account of what happened, was mechanic Medardo Cordoba Torres. He helped maintain the last aircraft that fought on the side of President Carranza, at Albijes Puebla. (*Revista Tohtli*)

As the political turmoil around and within the Carranza government continued to increase, the requirement to get the sole Farman operational increased. Because the French test pilot Dupont had not arrived, a decision was made for one of the Mexicans to fly it. All the pilots went to *Coronel* Salinas to offer to fly the Farman. The decision to select the pilot fell not only to Salinas but also to Santarini. After consultation, the pilot who was selected was, Carlos Santana Carabeo known as the "El Indio" (The Indian). After brief explanation of the control panel by Salinas, Santana took off and performed a perfect flight. After that, Salinas named Santana chief instructor on the Farman.

Meanwhile, the fighting on the ground was intensifying and Carranza's forces used every means to try to defeat the rebels. They planned to use the sole Farman bomber to attack the rebel state of Sonora. Intended to be launched from Mexico City, this mission would take multiple refuelling stops at various landing grounds along the way. Correspondingly, a team of seven pilots and cadets commanded by *Teniente* Rafael Montero Ramos was deployed to survey possible landing strips. They travelled in a small train consisting of one locomotive, a passenger car painted in green with the aviation crest on either side, and an armoured gondola, but no armed escort. Eventually, Montero and his aides managed to establish several emergency fields through the states of Querétaro, Hidalgo, Guanajuato, Nayarit, Sinaloa, and Jalisco, sometimes with – and sometimes without – the help of local Army garrisons, or at least the local civilians. Their trip back to Mexico City was undertaken in a great hurry to return to safety before they could be cut off by the rapid rebel advances: for example, they only just reached the capital before the Loyalist forces were evacuated to Veracruz.

Aviation Service in Action

While back in the capital, *Coronel* Salinas and *Teniente* Fernando Proal Pardo requested an audience with the president, to propose the plan to fly him out to the Port of Veracruz in the Farman bomber, piloted by Carlos Santana. However, the president turned down their offer, preferring to share the same fate of his forces. With the Constitutional Liberal Army (*Ejercito Liberal Constitucionalista,* ELC) getting close to the capital and more Army units joining them, the Military Aviation Service was put into action.



One of the leaders of the revolt against President Carranza, future president of Mexico, *General* Álvaro Obregón. (Authors' collection)

Tte Piloto
Luis Preciado de la Torre

One of *General* Obregón's supporters in the MAS was *Teniente P. A.* Luis Preciado de la Torre, who helped take over the Aviation School and shops on 8 May 1920. (*Revista Tohtli*)

Instead, Santana then used the Farman to bomb rebel forces in the state of Morelos in early May 1920, while other aircraft flew reconnaissance missions in the direction of Pachuca and Puebla, to keep an eye on the advance of the revolutionaries. The 14 May 1920 edition of the *El Informador* newspaper of Guadalajara Jalisco, reported that an aircraft of unknown type passed over the town of Cuernavaca, where Obregón was staying. During the first raid flown by the air force, on 3 May 1920, the aircraft in question dropped seven bombs over the local train station: none caused any damage. Immediately after, the crew of the same aircraft also dropped leaflets signed by *General* Francisco L. Urquizo, urging the soldiers of the local garrison to stay loyal to Carranza.

The second raid on Cuernavaca too place on 5 May 1920, the same day on which *Capitán 1/o* Felipe S. Carranza was named the Chief Pilot of the Military Aviation School. Actually, the sortie in question was almost 'peaceful' by nature, as the crew only dropped additional leaflets, urging the local garrison to remain loyal to the central government. Nevertheless, *El Informador* reported that the newspapers in Mexico City were reporting repeated aerial bombardment of Cuernavaca, resulting in the 'destruction' of the local railway station, the cathedral, and the Palace of the Spanish Conquistador Hernan Cortez. Certainly enough, nothing of this was true, but this did contribute to Carranza's loss of support among the armed forces and the air service in particular and henceforth, most of the pilots refused to bomb targets without a military objective. Indeed, a group of fliers around *Capitán* Diez Martínez and *Teniente* Preciado de la Torre published a letter declaring they would not follow any kind of 'repetition of aerial barbarities.'

Preparations for Carranza's Evacuation

Nevertheless, on 5 May 1920 other air raids were reported from the regions of Yuatepec and Tres Marians in the state of Morelos. In reality, the flight in question was undertaken by *Teniente* Samuel Rojas, who flew a Serie A 25A39 biplane on reconnaissance – only to return with his wings holed by enemy ground fire, and an impact in front of his seat, indicating that a bullet had missed him by inches. *Teniente* Eliseo Martin del Campo later wrote the following account, depicting what appeared to have been preparations for Carranza's evacuation from Mexico City:

> The last 72 hours prior to our defection, me and David Mendoza Hermosillo acted [as] the officers in charge of guard duty. On the last night, while preparations were being made for the evacuation of the government forces, the telephone rang about 4pm and on the other end a voice asked:
>
> Commander of the hangar guards?
> Present, who calls?
> It is *Coronel* Salinas.
> At your orders, my *Coronel.*
>
> Immediately you and another officer go to the house of *Capitán* Villasana and bring him to my house.
>
> Perfect my *Coronel*….
>
> After I had hung up the phone, Mendoza told me: 'Look compadre, go on in the Ford along with Gutiérrez (fellow pilot Juan Gutiérrez Valladares) and pick-up *Capitán* Villasana from his house or wherever you find him and take him to Colonel Salinas's house.' Yes, Commander and I took off.
>
> We arrived at Villasana's house and let him know the orders and in the same vehicle we went to the Colonia del Valle. Juanito and I remained seated outside of the house but in front of the open window of the office of Salinas. *Coronel* Salinas said the following:
>
> Villasana, have you completed my order?
> Yes, my *Coronel*.
> I want the railroad cars that are at the workshops to finish loading all the aviation material they can, especially the engines. Everything must be done immediately. The cars should be moved to the railroad yards where the aviation train is being formed. Please hear this well Villasana, the material that cannot be taken you should burn. Leave immediately and see that my orders are carried out.
>
> Fortunately, Villasana took him for crazy and did not do it. If he had, he would have been shot at the triumph of the revolution.[6]

After the meeting, Del Campo dropped off Villasana at the workshops and headed back to the airfield, where he explained everything to his brother Waldo, also a pilot. After finishing his story, Mendoza told him that this sounded like a retreat. Actually, Del Campo did not know that Mendoza was part of the *Obregónista* group inside the aviation air service. Later on, around 19.00hrs that evening, the guards received a call from *Coronel* Salinas, ordering them to abandon their positions and release all the guards, leaving the hangars in charge of civilian guards. Unsurprisingly considering such treachery from within, the town of Puebla was also quickly overrun by the revolutionaries on the same day.

Another eyewitness of the events of May 1920 to leave behind a written account, was *Teniente P.A.* Eliseo Martin del Campo. (del Campo Collection)

On the morning of 6 May 1920, *Capitán* Becerril – now the Officer Commanding the Military Aviation School – mustered all of his personnel and read a Presidential Order to everybody who wished to remain behind, without threat of pressure or reprisal. Asked to step forward if they wanted to remain in the city, all remained in their positions. Correspondingly, Becerril went on to order preparations for the evacuation of available equipment and personnel. The same evening, *Capitán* Sanchez Carranza ordered mechanic Medardo Cordoba to prepare the Farman and a few 'Hispanos' for a mission the next day. The following night, Carranza parked in front of the hanger and told Cordoba: 'I wish it would not be tomorrow, My *Coronel* has fed pure snakes. I do not want to see those traitors; this place should not be stained by treason…. Now my *Coronel* has entrusted me the aviation unit, and I do not what to fail. By my honour, I will not see everything thrown away.'

7 May 1920: Rebels in Mexico City

With railways being the primary means of travel and transportation in Mexico at that time, when Carranza's government decided to evacuate Mexico City, it did so by train. While related preparations had begun days earlier, due to repeated delays caused by many of the railroad workers and engineers refusing to support this effort, most of the evacuation was organised only on 6 May 1920, literally at 'five to twelve'. Indeed, the evacuation only began on the following morning – the same day the first rebel forces reached the capital. The first to leave was the presidential train named *Dorado*. It was followed by a long 'convoy' of trains – about 60 in total, extending over 25 kilometres – carrying everything needed to transfer the presidential powers to the port of Veracruz, along with the families of government members, additional weapons, artillery, ammunition, and money. The procession was so long that not all the trains managed to leave in time: indeed, up to half of them were eventually stopped and captured by the forces of *General* Jesus M Guajardo, which caused many casualties to the loyal troops in the process (the latter included a total of two squadrons of cavalry from the Military Academy, and some artillery and infantry). The trains that managed to get away first made a stop at Villa de Guadalupe, where additional loyalist troops joined to improve protection of the presidential procession.

Betrayal at Balbuena

Years later, mechanic Cordoba recalled the following events from the Balbuena Airfield as of the morning of 7 May 1920:

> Early in the morning, I moved the aircraft out of the hangars. First the Farman and then the Hispanos. When the sun appeared on the horizon, the pilots arrived to occupy their post. Captain Sánchez Carranza, in the cockpit of the Farman, gave the order for the first Hispano to take off. He flew a large semi-circle before taking a route in the direction of Puebla.
>
> Suddenly the whistle of a locomotive made us turn our heads, to see a long convoy with rebel troops that was slowly stopping. ['] They are here, yelled the captain, let us get out of here! ['] Indio Santana made the engines of the Farman come to life and took off heading in the direction of Texcoco. Pilot Rojas and I were in the second Hispano. He was as calm as usual. When we observed the movement of the rebels getting off the rail cars, he gunned the engine and took off.

While mentioning that before the take-off he saw other ground personnel near the aircraft the night before – some carrying buckets of water mixed with fuel, and nobody taking any action against them (thus indicating a rift within the service caused by the *Obregónistas*) – Cordoba did not mention any resulting problems, nor if there were any other aircraft left inside the hangars or the workshops. Similarly, he did not mention the mission of the three involved aircraft. Supposedly, they were to protect the President's train, but it is unclear with what. If they did not carry any armament, they could only fly reconnaissance and even then, were not certain where they could land. According to other accounts, the aircraft were to fly to Apizaco, in Tlaxcala, wait for the trains, and then continue to Orizaba, in Veracruz, to provide air cover during the final part of the voyage.[7] Such a trip would have been easy for the nimble Hispanos, but the big Farman required a longer runway. Moreover, if they would have followed such a flight-plan, they would have all ended being captured by the rebels because the local garrison commander had meanwhile switched sides.

Table 1: Aircraft and Crews that departed Balbuena Airfield, 7 May 1920[8]

Aircraft	Crew
Farman F.50BN2	*Capitán* Felipe S. Carranza, *Teniente* Joaquín Martínez de Alba, *Teniente* Carlos Santa Ana
TNCA Serie A (Hispano Suiza 150hp)	*Teniente* Jorge H. Bernard, *Teniente* Felipe H. García
TNCA Serie B? (Hispano Suiza 150hp)	*Teniente* Samuel C. Rojas, Mechanic Medardo Córdova Torres

Only the last of the three aircraft arrived at their destination: the train station of Apizaco. The other two were forced to land while underway, both due to engine failures – almost certainly caused by fuel mixed with water. Both engines of the sole Farman stopped as the aircraft was passing the town of Texcoco, forcing the pilot to land at Las Blancas. Cordoba continued his recollection:

> In Apizaco the news was not that bad: the Presidential Train would arrive in the afternoon followed by the supply trains, but the two other aircraft did not arrive at this place of reunion. In the evening, we heard a shout of joy! Santana has arrived! But

Felipe Carranza.

Capitán 2/o Pilot Aviator Felipe Carranza, who led the three aircraft to provide cover to the presidential trains on their way to the Port of Veracruz. After his aircraft was forced down and captured, he later committed suicide. (*Revista Thotli*)

President Carranza with some of his followers seen while abandoning the trains at Albijes on 13 May 1920 after the railway to Veracruz was blocked and the garrison commander switched to the rebel side. (Casasola Collection)

FUERZAS OBREGONISTAS
EN LA ESTACION DE SAN
ANDRES PREPARANDOSE
PARA EL SEGUNDO ATAQUE
AL CONVOY PRESIDENCIAL

Rebel troops at San Andres train station, preparing for another attack on the presidential trains in May 1920. (*Los ferrocarriles en la Revolucion mexicana*)

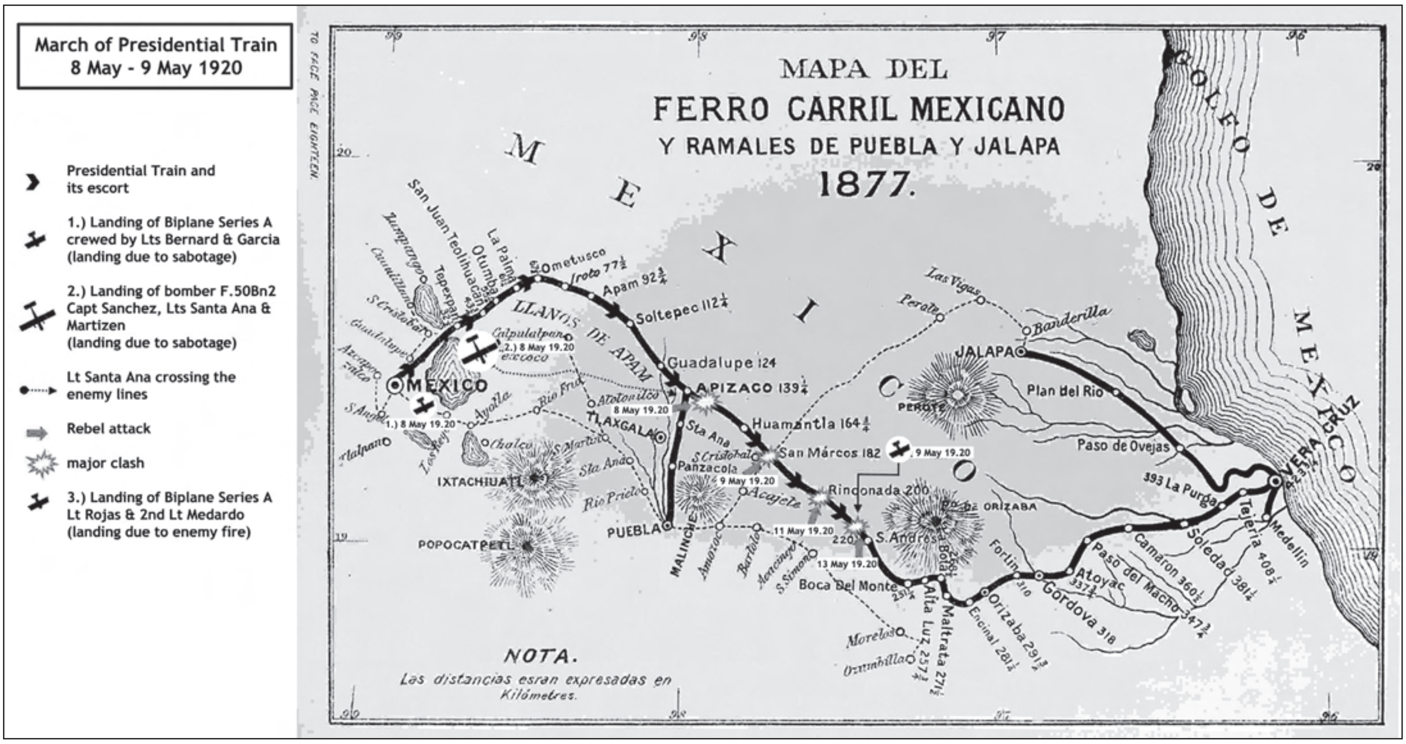
> in what shape: bloody and tired, [‘] What happened, Indito [?’] we asked. ‘An engine failed, it had water in the fuel tank,’ and he was forced to land. *Capitán* Carranza was hurt in one leg and he could not continue the march with me. He told me, ‘Go Indito, accomplish your task, go with the president, and tell my *Coronel* what happened’.

Martínez Alba was injured, too, and Carranza decided to stay with him while ordering Santa Ana to make to the trains. Both were captured by *Zapatista* soldiers: Alba was then evacuated for medical care to Mexico City, while Carranza was jailed. Contemporary reports differ, stating sometime between 8–10 May, while in a prison, Carranza asked one of the jail’s guards to have a look at his weapon. Being a former ‘comrade in arms’, the guard agreed: as soon as he had the weapon in his hands, Carranza shot himself in the head. According to another version, Carranza was held in a civilian home but permitted to retain his personal pistol and, after writing a letter to his mother and giving away some of his personal effects, he shot himself. More recent evidence suggests he died after being released. Certainly enough, his death certificate was issued on 9 May, and mentioned his death as at 13.30hrs, while the news of his death was released by the press on 12 May. *Captain* Felipe S. Carranza was buried at Panteon Espanol of Mexico City.

The crew of the second aircraft – the Serie A biplane flown by *Teniente* Jorge H. Bernard and Felipe H. García – made it to the ranch La Magdalena before their engine stopped. They made a successful emergency landing and left the aircraft on foot, marching in the direction of Apizaco train station. Underway there, both were captured by *Zapatista* soldiers and sent back to Mexico City. Surprisingly enough, both were set free – probably due to Obregon’s general order for all the rebels to spare the lives of the aviation personnel. Later during the day, even the few trains that managed to evade the initial attack at Villa Madero, were caught by the rebels in the Teotihuacan area, stopped, and captured, one after the other.

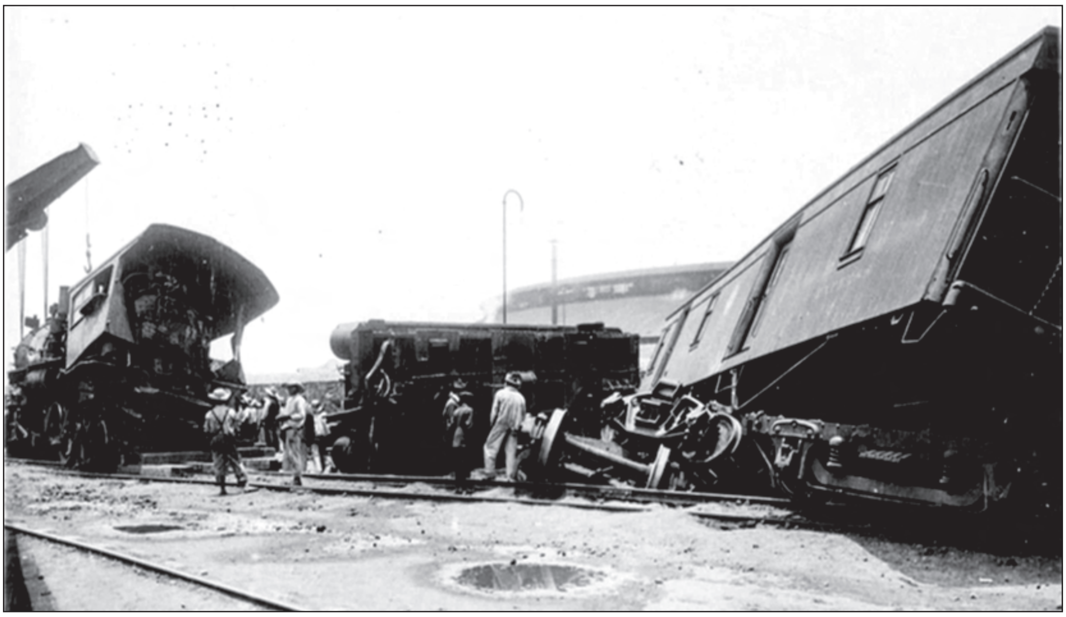
Aviation Train

One of the trains organised at the main railway terminal of Mexico City on the afternoon of 6 May was in the charge of Villasana, who reserved it for evacuation of the Aviation Service, its aircraft and personnel. The loading began only during the afternoon of 6 May, and – based on a report in the newspaper

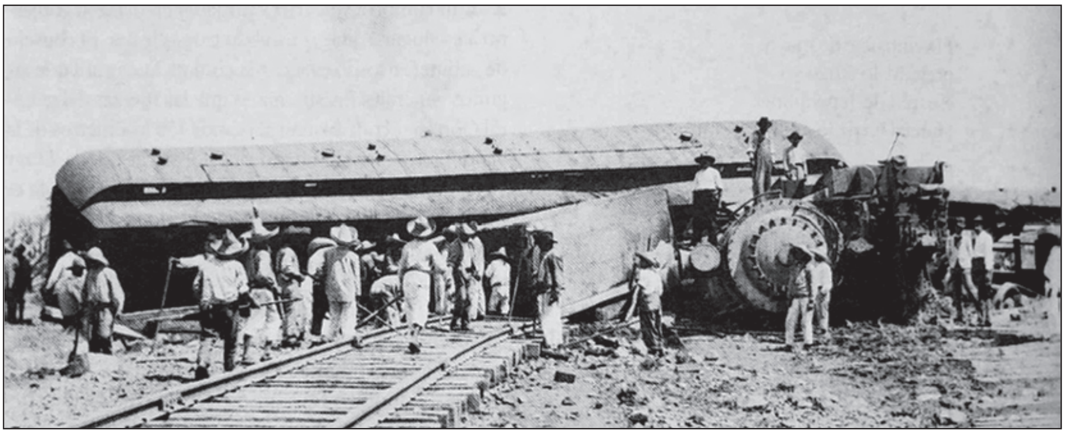

March of Presidential Train
8 May - 9 May 1920
Presidential Train and its escort
1.) Landing of Biplane Series A crewed by Lts Bernard & Garcia (landing due to sabotage)
2.) Landing of bomber F.50Bn2 Capt Sanchez, Lts Santa Ana & Martizen (landing due to sabotage)
Lt Santa Ana crossing the enemy lines
Rebel attack
major clash
3.) Landing of Biplane Series A Lt Rojas & 2nd Lt Medardo (landing due to enemy fire)
TO FACE PAGE EIGHTEEN.
MAPA DEL
FERRO CARRIL MEXICANO
Y RAMALES DE PUEBLA Y JALAPA
1877.
MEXICO
GOLFO DE MEXICO
LLANOS DE APAM
MEXICO
1.) 8 May 19.20
2.) 8 May 19.20
8 May 19.20
9 May 19.20
9 May 19.20
11 May 19.20
13 May 19.20
Apizaco 139¾
Guadalupe 124
Huamantla 164¾
San Marcos 182
Rinconada 200
Apam 92¾
Soltepec 112¼
Tlaxcala
Puebla
Jalapa
Perote
Plan del Rio
Paso de Ovejas
Veracruz
Orizaba
Cordova 318
Boca del Monte
Maltrata 271½
Soledad 381¼
Medellin
IXTACHIUATL
POPOCATPETL
MALINCHE
NOTA.
Las distancias estan expresadas en Kilómetros.

(Map by Manuel Reyna Garza)

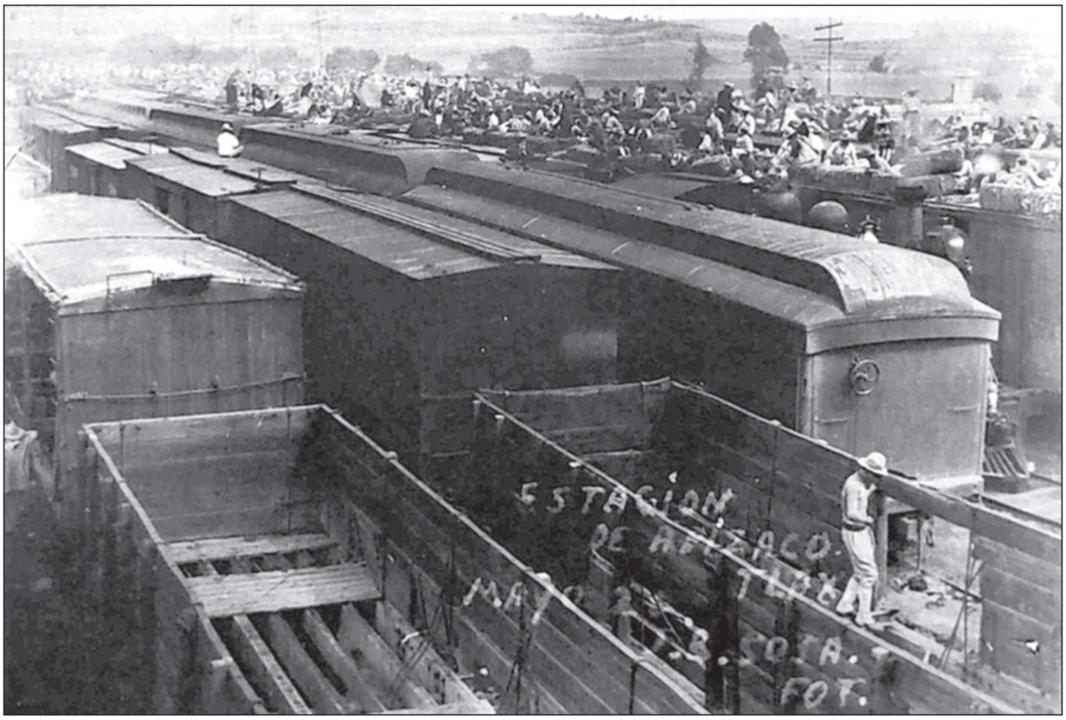
Excelsior two days later – it was still incomplete as of the following morning. Finally, it moved out in a convoy of three trains, at 1100hrs from Buenavista Station: one carrying the *2/o Battalion de Zarpadores*, which provided protection; another with a great quantity of supplies, and the 'aviation' train – carrying four aircraft, spare parts, and machinery from workshops – in the rear. The first train barely passed Colonia Vallejo, when a group of rebels commanded by *Mayor* Ignacio Cárdenas arrived to stop the second train. Realising what was going on, the commander of the first train ordered a return in reverse, but Cárdenas then ordered the second train to accelerate at full speed – and it crashed into the rear of the first train. The result was nothing short of a catastrophe: 27 people – including 10 women, two girls, and 10 soldiers – were killed by the force of collision, and 45 – including *Coronel* Gustavo Salinas – wounded. He was lucky: because Obregón ordered the lives of the aviation personnel to be spared, Salinas was sent home to attend his injuries.



Not all the trains made it out of Mexico City on 7 May 1920. One of those attacked by the rebels was the aviation train, where *Coronel* Salinas Carranza was wounded. Eventually, he managed to escape to the USA. (*Los ferrocarriles en la Revolucion mexicana*)



Another view of a train derailed by rebel attacks of May 1920, while trying to get out of the capital. (*Los ferrocarriles en la Revolucion mexicana*)



Some of Carranza's trains seen after being stopped and detained at Apizaco. (*Los ferrocarriles en la Revolucion mexicana*)

Final Flights

Following the capture of nearly 50 percent of the trains escaping from Mexico City, between 8–13 May 1920, President Carranza managed to collect about 3,000 infantrymen and 1,100 cavalry troops (mostly from the Military Academy), with a very small number of artillery pieces. With him were still some aviators, including Rojas, Santana and mechanic Cordoba, whose aircraft was loaded on a train in Apizaco on 7 May. Further escape was problematic, however, because the rebels began tearing up the tracks. Thus, a running battle developed as the convoy of trains still underway for Veracruz repeatedly had to stop for their crews to repair tracks, only to come under attack of rebel forces. At least initially, the latter were beaten back, but the time was clearly against the Loyalists. The beginning of the end came once it became known that the commander of the Veracruz garrison had switched sides to the rebels. Left without choice, on 13 May 1920 Carranza and a few loyal followers left everybody behind and continued their flight on horseback: all the trains were ordered back to Mexico City. According to the recollection of *General* E. Vargas Sánchez (who described the aircraft as a Serie H Parasol type), the initial escape route of the President was reconnoitred by the sole TNCA aircraft, flown by Rojas, who flew a short sortie. Somebody sabotaged one of the wheels, but the aircraft was lowered to the ground and managed to take-off, nevertheless. Hardly airborne, Rojas came under fierce ground fire. Back to the train, he made a good landing, but due to the damaged wheel the aircraft ended upside down. The pilot was not hurt, indeed, Rojas came away only to be wounded by shrapnel from an artillery shell that killed the horse he was riding as he escaped.

The other pilot to make it safely to Apizaco was Santa Ana, who – according to Cordoba – also flew one reconnaissance mission. Probably on 13 May 1920, Santa Ana then found Cordoba analysing the situation:

> The President ordered me to fly a reconnaissance flight over the enemy line. 'Ready,' I answered, but I knew: there was little oil and little fuel. We need[ed] to lower the aircraft from the car and arm it to make it ready. We prepared the fuel by cooking oil and automotive fuel, and then lowered it to the ground. During the difficult process of lowering the aircraft from the railroad car without any aids, the fuselage was dropped hard, damaging the landing gear and one of the propeller blades. 'Now it cannot fly,' I told Carlos (Santana) as I showed him the damage. 'The order has to be carried out; I will fly it this way. Assemble it.' The aircraft was ready in a couple of minutes – a real record. Since we did not have the proper tools, none of the struts were secured and none of the screws were correctly secured. There were no spare parts; the train that carried them had been captured by the enemy. The motor was warmed up, and after choosing a piece of land that didn't have too many obstacles, the aircraft was positioned for take-off.

The aircraft piloted by Santa Ana was the Serie B biplane number 1, designed by *Coronel* Salinas and Maestro Santarini. The upper wing was a couple of metres larger than the lower one giving its beautiful lines. All its structure was manufactured at the *Talleres Nacionales de Construcciones Aeronautica* with Mexican materials. The engine was a 160hp Hispano Suiza. Santana undertook a reconnaissance flight, along the railroad line and after landing, rendered his report to the president. At that moment, as mentioned by Cordoba, enemy cavalry launched their attack: 'Santana asked if I had checked the aircraft. "Yes", I answered, "some struts are loose, but they have been tightened and there are bullet holes in the tail and a hole in front of the seat". "Yes, that bullet missed my face", he replied.'

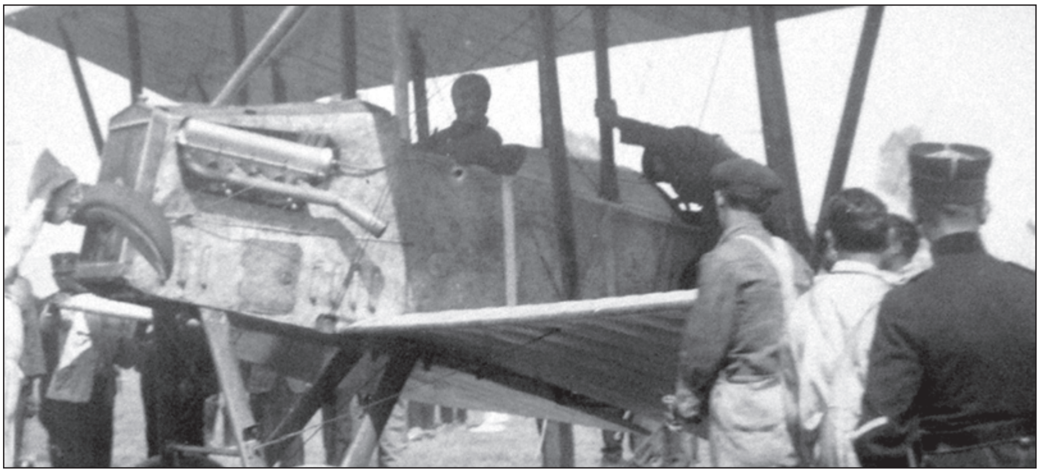
The enemy cavalry had already passed the abandoned rail cars when Santana took off. Flying at low level, he made many passes at the enemy cavalry, firing his pistols and causing panic among the enemy riders:

> When Santana used up all the ammo in his pistols, he returned. The wings and fuselage were perforated, the struts were loose, and the gas and oil tanks empty due to bullet holes. 'Burn it so they cannot use it against us and let us go they are here', he told me. Rebel bullets were already raising dust around us, so we followed the President into the Sierras.'

Eventually, Cordoba did not burn the aircraft. Thus, along with Santana and Rojas, he was captured and returned to Mexico City. Rojas was sent to the hospital, where he joined Martínez Alba, before returning to the airfield in a cast.

This last attack on the presidential trains was carried out by the rebel forces of *General* Guadalupe Sánchez with 1,500 infantry, and *General* Adalberto Palacios with 2,000 cavalry according to the after-action report that was published in the press of 15 May 1920. This quoted *General* Sánchez's report about the following captured

TNCA Serie B (Modified A)



Through late 1919 and early 1920, some Serie A biplanes were upgraded, receiving a rounded fuselage, separate cockpits, simplified landing gear, and an extended upper wingspan designed by mechanic Medardo Cordoba, reportedly prompting Santarini to unofficially redesignate them as Serie B biplanes. (Ing. Enrique Velasco Collection)

Apparently inspired by European designs, some of the TNCA Series A aircraft were modified in their structure, reinforcing it with greater number of struts, sesquiplane type wings and a curved fairing on the upper part of the fuselage.

It is worth mentioning that these airplanes that were observed had been in use since 1920 and were the second built in the National Aeronautical Construction workshops called Serie B, thus causing confusion among scholars since in less than 10 years there were three different models of the aircraft called TNCA Serie B.

The modified plane in the photograph is seen without weapons or bomb racks. The use of the Hispano Suiza 8 cylinder 150h.p. engine led to the Mexican military aviation personnel calling them 'Hispanos.'

After the end of fighting, the new government took inventory of the treasury Carranza was trying to take to the port of Veracruz. (*Los ferrocarriles en la Revolucion mexicana*)

equipment: 24 trains, many automobiles, four artillery pieces of large calibre, two mountain artillery pieces, 200 machine guns, one airplane, a large quantity of rifles, ammunition, equipment and about 2,000 prisoners. Certainly enough, following Obregón's order, guarantees of safety were given to all the airmen, even to all the surviving occupants of the presidential trains: they were gathered at a local hacienda, and then moved by train to Veracruz, and then back to Mexico City. As for the airplane reported captured by *General* Sánchez, its type remains unclear, but most probably it was a TNCA Serie B No.1, modified from a Serie A standard.

Collecting Pieces

As events were unfolding, other pilots began gathering at Balbuena Airfield after it was overrun by the rebels, together with the capital. Once there, they were surprised to learn that *Capitán 1/o* Roberto Diez Martínez had crystallised as the leader of the *Obregónista* group within the Aviation Service and on 8 May 1920 had assumed the command of the Military Aviation School and the TNCA Workshops, with *Teniente* Luis Preciado de la Torre as deputy. Another pilot that turned out to be a member of this group was Rafael Ponce de León, who reportedly had political aspirations and may have written an article against Salinas, exposing his 'mismanagement of the Aviation Service.'

Perhaps in order to demonstrate support for the new government, reports were published on 9 May 1920, that a 'large' group of pilots of the Military Aviation School turned out at the Headquarters of the Revolutionary Army and were received by *General* Jacinto B Trevino: supposedly, they announced their intention to continue with their studies and even offered their services to the rebels. However, other reports indicated something entirely different. For example, three days after securing Mexico City, on 11 May 1920, the former presidential candidate Pablo Gonzalez established himself the new commander of the local garrison. His first decision was to

Teniente Piloto Rafael Ponce de León.

One of Obregón's supporters within the ranks of the MAS was *Teniente P.A.* Rafael Ponce de León, who – reportedly – wrote several politically motivated articles against *Coronel* Salinas Carranza and the way he was handling the service. (*Revista Tohtli*)

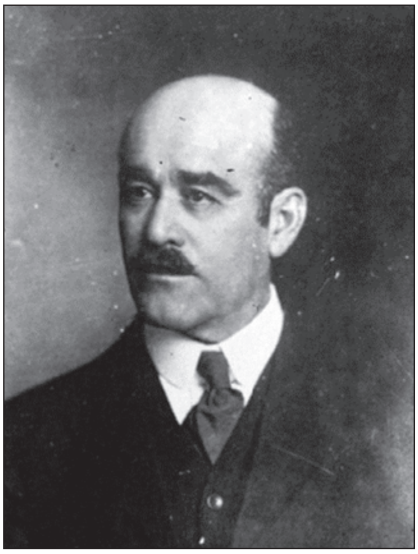
One of the last pilots defending Carranza was *Teniente P.A.* Carlos Santa Ana Caraveo. Indeed, he flew the final mission in defence of the trains at Albijes, reportedly in a Serie B biplane, or, more likely, a modified Serie A. (Fondo A Salinas Carranza)

intensify the search for Carranza and his group, and subject it to intensive attacks. Correspondingly, he ordered the pilots Fernando Proal, Rafael Altamirano, Jesus Romo, and Salvador I Cano into the air. Rather bluntly, Cano responded that should they find Carranza, they would not attack, but join him, which Gonzalez concluded with the following statement: 'Good gentlemen, I conceded your reason, and I do not need to say anything about your loyalty. You may leave.'

Gonzalez's pursuit proved deadly even without air power. On 21 May 1920, the revolutionaries caught Carranza in a hut near the village of Tlaxcalaltongo, in Puebla, while stopping to rest during the night together with few of his most loyal supporters. The body of the president was returned to Mexico City on 24 May. Despite threat to their lives and careers, many pilots publicly paid their respect to the fallen leader. Amongst them was Samuel Rojas, who mounted a guard around the coffin. Carranza was buried at the cemetery of Dolores on 25 May 1920, in the presence of his family, the entire diplomatic corps, and thousands of supporters.

The Aftermath

At least nominally, Carranza's successor was the engineer Ignacio Bonillas Fraijo: a former ambassador to the USA (from 1917 until 1920), who successfully negotiated the withdrawal of American forces from Veracruz in 1914. However, his appointment found no wide support because the revolutionaries favoured Obregón instead. Diez Martínez and his group took over the Aviation Service, however, his tenure as commander was cut short by a tragic accident of 31 May 1920, when Diez Martínez and the French pilot Leopold Dupont took off in a repaired Farman F.50Bn2 bomber for a test flight over Mexico City (based on photographic evidence, it appears this was the second Farman, which was not evacuated with Carranza's trains). Dupont and Diez Martínez were accompanied by *Tenientes* Jorge H. Bernard and Rafale Montero, and the contract mechanic Anibal Paiconici. They were flying a circuit around the popular Lagunilla marketplace when the aircraft suddenly crashed. The locals pulled the crew from the wreck, but the injuries sustained by Diez, Dupont, Paiconici, and Bernard were too massive: Rafael Montero was the sole survivor. Subsequent investigation determined that Dupont was overconfident and flew much too low over Mexico City, while his Farman was missing certain flight instruments. Diez Martínez remains the only chief of the Mexican Air Force to be killed in a flight-related accident.



President Carranza's chosen candidate was the civilian engineer Ignacio Bonillas Fraijo. However, he was not popular with the public or the majority of the armed forces. (Authors' collection)

While some had expected Alberto Salinas to be appointed as replacement for Diez Martínez, no such thing happened. Salinas was meanwhile in temporary exile in the USA. He returned to Mexico in November 1920, but then became involved in a failed uprising against Obregón led by *General* Francisco Mungia, during which his brother was killed, and he was narrowly saved from a firing squad by *General* José Gonzalo Escobar's intervention. Sentenced to a long prison term, he was pardoned early and – after another period of exile in the USA – went to live in Peru. Instead, in September 1920, *Mayor* Samuel Amerzquita Liceaga – one of the signatories of the *Plan de Aqua Prieta* – was named the new Chief of the Aviation Service. By the time, it appears that all the aviation-related material – all the aircraft, spares, and tools – taken away to protect the presidential trains, was recovered and brought back to the TNCA workshops for repairs. Gradually, all the surviving aircraft were returned to service.

Amerzquita Liceaga appointed Francisco Santarini as an instructor at the Military Aviation School, together with pilots

Serial Numbers of the Military Aviation Service

The first aircraft of the Military Aviation Service received their serial numbers while still in the workshop. The original system included three designations, known as 'number-letter-number'. This included:

- Individual number of the aircraft in the series
- Series designation or purpose of the aircraft
- Manufacturer's airframe number

The purpose of the aircraft was designated as follows:

- A = *Escuela o Uso General* (training or general purpose)
- B = *Transporte/Bombarderos* (transport/bomber)
- C = *Caza* (fighter)
- D = *Escuela* (training)
- E or F = *Entrenadores* (trainers)
- G = *Entrenador Avanzado* (advanced trainers)
- H = *Parasol/Observacino* (parasol/observation)

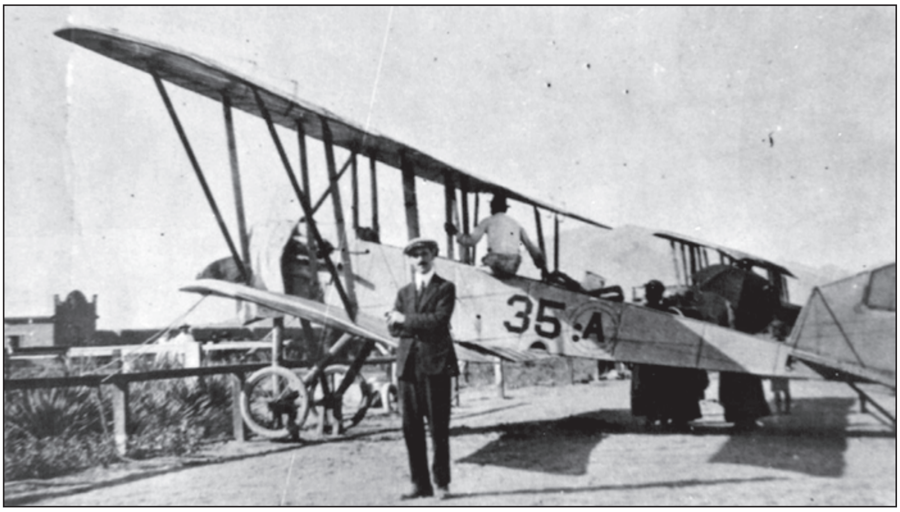
The letter was usually applied within a circle, which included the inscription TALLERES NACIONALES DE CONSTRUCCIONES AERONAUTICAS MEXICO D. F. Later on, this was replaced by the title *T.N.A. Mexico D.F.* (standing for *Talleres Nacionales de Aeronautica*). Usually, it was applied on the fuselage, but sometimes on the fin.

For example, the TNCA Serie A biplane 6-A-19 stood for the 6th aircraft in the batch, Serie A, 19th aircraft manufactured by the TNCA. Another good example was the aircraft with the serial number 82-A-189, which stood for the 82nd Avro Aircraft Type A, and 189th aircraft manufactured by the TNCA (and, later on, TNA).

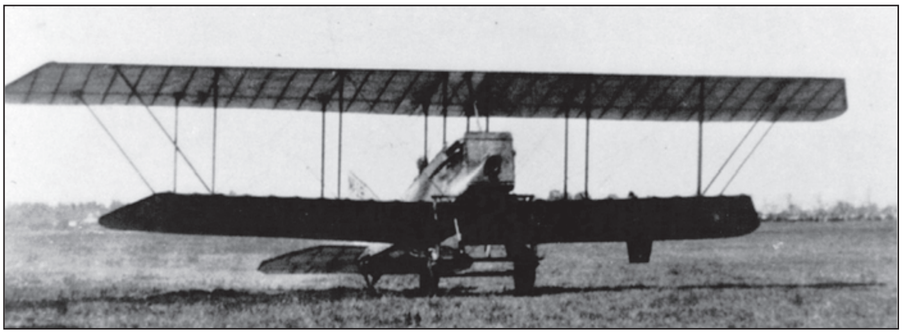
While accepted in general, this 'rule' was not respected by everybody. For example, engineer Lascurain y Osio manufactured his own series of parasol aircraft, which were all designated with the letter E. Foremost, this serial system was not applied on the aircraft bought during and after the De la Huerta Rebellion of 1923–1924 (see below for details), like the de Havilland DH.4B, Lincoln Standard, Bristol Fighter, Vought Corsair and many others.

Finally, after the 1929 Escobar rebellion and reorganisation of tactical units of the Military Aviation Service (MAS), a new serial system was introduced, starting with Chance Vought Corsair number 1. As far as is known, this went up to number 69, and ended once Mexico began receiving US-made aircraft in 1942.

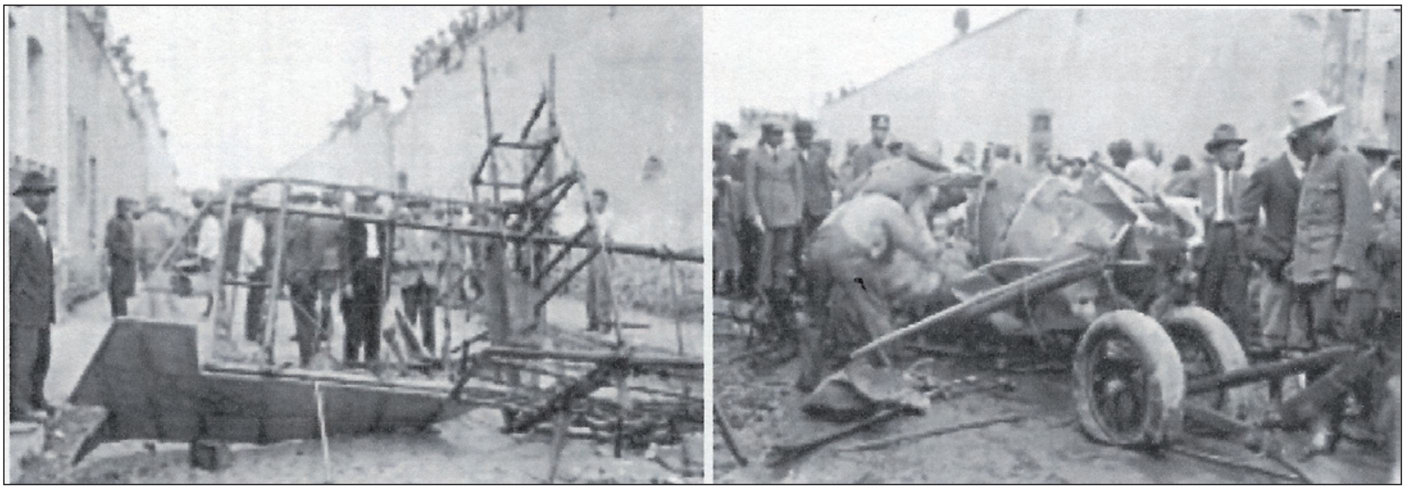
One of the aircraft sent to escort and defend the presidential trains to Veracruz was this TNCA Serie A biplane, serial number 35-A-50, powered by a Hispano Suiza engine of 150hps. (Ing. Enrique Velasco Collection)



Another view of the TNCA Seria A serial number 35-A-50 during the campaign against local bandits and what was left of *General* Francisco Pancho Villa's forces in northern Mexico. (USAF)



The TNCA Serie A biplanes equipped with Hispano Suiza engines imported from Spain were colloquially known as 'Hispanos.' (Carlos L. Vazquez Collection)



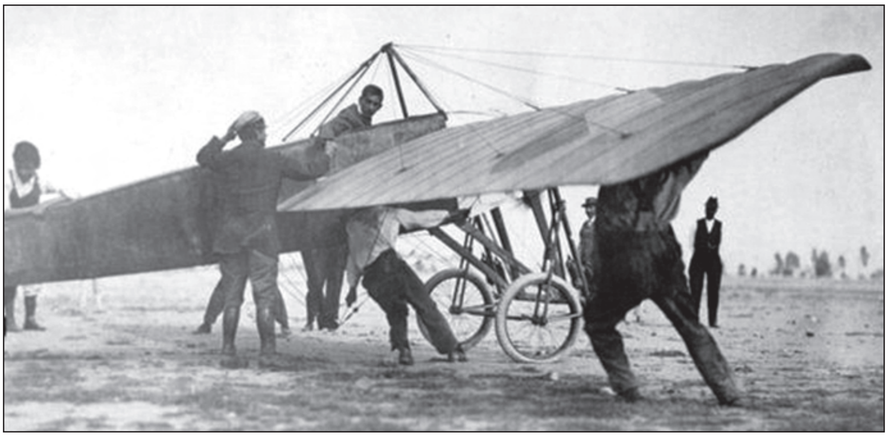
The wreck of the Farman F.50Bn2 that crashed in Mexico City, killing the chief of the MAS, Roberto Diez Martínez, the French pilot Dupont, an Italian mechanic, and others. (*Archivo General de la Nacion*)

Samuel Rojas, Guillermo Ponce de León, and Santiago Vazquez. However, Santarini served for only a relatively short period of time before deciding to leave military service and settle down later with his family in the state of Veracruz. Juan Guillermo Villasana was replaced by Angel Lascurain y Osio – a civilian engineer – as the Director of the TNCA, which relaunched production of locally designed aircraft. Villasana went on to establish the Department of

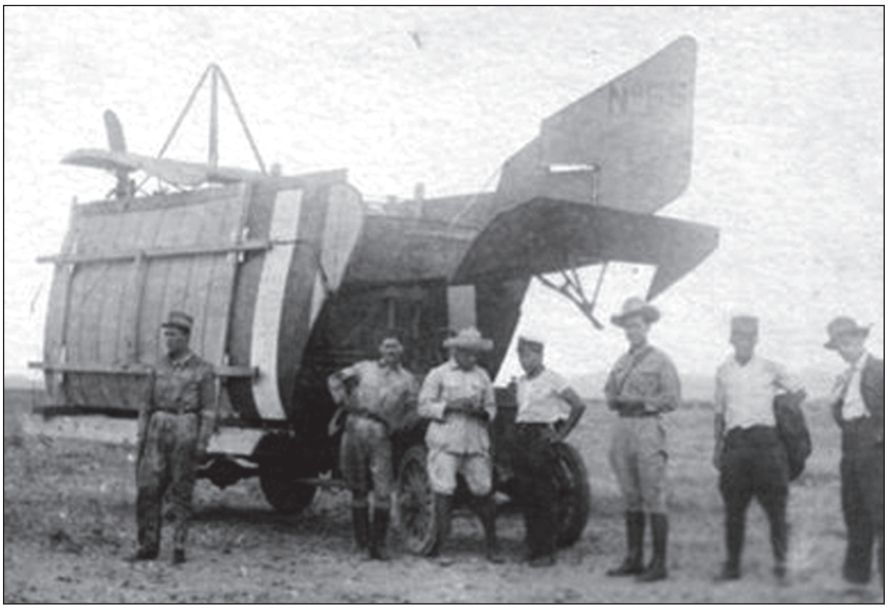
Markings of the Military Aviation Service

The first Mexican military aircraft to receive any kind of markings were two Moisant Bleriot monoplanes, deployed in 1912 by Federal forces against the rebellion led by Pascual Orosco. They received the title EJERCITO under one wing, and MEXICANO under the other. During the revolutionary period, the Constitutionalist-operated Kantner Moisant monoplanes received the title DIVISION DEL NORESTE on the fin; and sometimes also the aircraft's individual number (1, 2, 3, etc.). However, there is no evidence about the application of any other kind of markings during this period by any faction.

When the Aviation School was established in November 1915, some of its aircraft – like surviving Kantner Moisant monoplanes – received a shield with national colours in green, white, and red (applied by hand) at 45 degrees inclination on their wings and rudders (interestingly, there is no evidence that such national markings were applied on any of the surviving Bleriot monoplanes). Later on, some Serie A biplanes – like 4-A-17 and 5-A-18 – received the title SERIE B applied in black on the white field of the national tricolour, while TNCA Serie H Parasol and Farman F.50Bn2 bombers had the tricolour applied in straight lines down the outboard edges of the wing. During the campaigns of 1918–1919, *Coronel* Alberto Salinas Carranza encouraged his units to adapt the unit insignia. For example, the *Flotilla de Operaciones Number 1* began



Notable on this Kantner Moisant monoplane of the Aviation School in November 1915, is the application of the shield with the national tricolour. (Reyna-Garza Collection)



Application of the national tricolour in the form of stripes along the outboard wing edges, seen on a TNCA Serie H Parasol. (Reyna-Garza Collection)

Civil Aeronautics and, although subsequently leaving the service, he would return for short-term tours of duty, time and again.

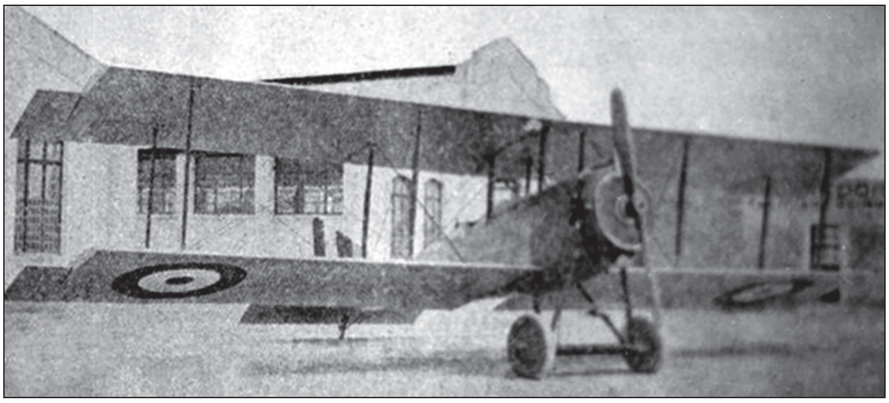
However, the biggest and most profound change in the Aviation Service after the fall of Carranza's government proved to be the arrival of Ralph O'Neill in August 1920. As mentioned earlier, he had served with the 147th Aero Squadron of the 1st Pursuit Group, USAS, in France, during the First World War, and reached the position of the Commander B Flight, completing 103 combat sorties, and claiming the destruction of 11 enemy aircraft, six of which were confirmed. Hired by de la Huerta, O'Neill first audited the Aviation Service in order to prepare a report about its state. Pulling no punches, he outlined all the shortcomings, but also praised the professionalism of its pilots and ground personnel.

Certainly enough, some Mexicans have had a rather negative view of O'Neill's role – principally because he effected the end of production of domestically-designed aircraft and engines. However, in the opinion of the present authors the people in question did not realise that the Aviation Service had stagnated and was failing to catch up with the latest advancements that resulted from experiences of the First World War. Correspondingly, it was organised and equipped on the basis of completely obsolete doctrine and training its pilots on the basis of experience from the times of the Mexican Revolution, back in the 1910s, while the locally designed aircraft were at least a generation behind those now available elsewhere and developed on the basis of experiences from the Great War in Europe. Unsurprisingly, Mexican attempts to sell aircraft elsewhere around Latin America not only came too late, but the designs were hopelessly obsolete at the time the market was flooded by far superior machines and highly experienced pilots from the First World War. Overall, it appears that only one domestically-designed and -manufactured aircraft was ever sold – and that to the civilian market, to a former cadet of the Aviation Service that became Mexico's first civilian pilot, while also serving as reservist in the military.

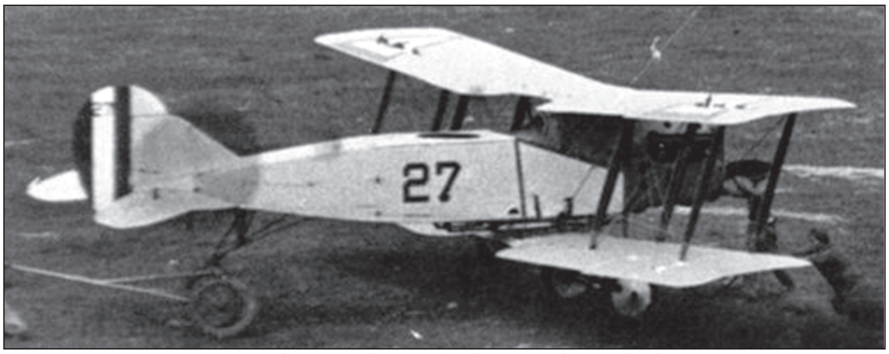
On the contrary, O'Neill would modernise not only the training system of the Military Aviation School, but also introduce proper medical examinations for candidates willing to join the service as pilots; he would introduce dual control training and take care to retrain older pilots to new standards. Surely enough, the latter did not like this practice very much, because they perceived it as a 'downgrade'. However, after securing the full support of President Obregón, and then Secretary of War and Navy Calles, there was no holding back: indeed, when O'Neill put the veteran pilots through his refresher course, it turned out that many had acquired bad flying habits, and there was no common standard amongst them. Correspondingly, O'Neill took care to contract additional veterans from abroad, to serve as instructors and bring all the Mexican pilots to the same standard, before retraining most of the Mexican veterans to serve as instructor pilots at the Military Aviation School. For the same purpose, he favoured the acquisition of Avro 504K/J trainers, at the time considered some of the best training aircraft around, and already serving with dozens of air forces. Eventually, the Avro 504s were later to be manufactured under licence by Avro Anahuac of Mexico, while O'Neill's training syllabus not only benefitted the veteran pilots, but also the next several generations of Mexican military fliers. In the opinion of the authors, there is no doubt that with his arrival and activities, Mexican military aviation entered a new chapter in its history.

applying the cartoon of a sombrero on their aircraft, while one of the Serie A biplanes had the head of an Indio on its fin.

When exactly the present-day 'triangle' – applied on all aircraft and helicopters of the Mexican Air Force – was introduced, remains unknown. Reportedly, this began appearing around 1921, by when next to no foreign aircraft were in service: indeed, as of the time – and for a short while – some aircraft received the widely used 'roundel'. This was foremost for TNCA Serie B biplanes powered by the French-made Salmson engines. However, even the last few of these eventually received the 'triangle.' Even once the latter began appearing, on the 10 Bristol F.2B Fighters and two Type 93B Bristol Boarhounds, it was applied inverted (and on all four positions on the wings). Reportedly, for a while, the MAS did consider retaining its national insignia that way, but eventually: this practice was discontinued at least when Vought Corsairs were acquired.



The first TNCA Serie B Salmson Puro seen with a roundel in Mexican national colours. (Reyna-Garza Collection)



A Bristol F.2B Fighter with the triangle applied in inverted fashion. (Reyna-Garza Collection)

2

PROBLEMS WITH *CORONEL* CANTU, BAJA CALIFORNIA 1920

Even after consolidating their power, Huerta, Calles, and Obregón still faced resistance from many states as far too many Mexicans refused to recognise the bloody change in the political landscape. Between May 1920 and December 1923, no fewer than 13 Army generals declared open rebellion in various parts of the country: some were defeated quickly, others killed while fighting, yet others were captured – and a few executed – while some escaped into exile. Several of the loyal *Carrancistas*, as the followers of Carranza were known, left the country, while at least 11 governors were removed from office and replaced by those favoured by the new government. On 1 June 1920, only days after the death of Carranza, the Mexican Congress designated De la Huerta as the interim president of Mexico, pending new elections. Like Obregón, De la Huerta first took care of the remaining governors and generals causing him concern. Amongst these was the military governor of the northern Territory of Baja California, *Coronel* Esteban Cantu Jimènez, who had acted as state governor since 1915. Despite Cantu Jiménez's efforts, Baja California was still *de facto* 'forgotten territory' for successive governments in Mexico City: indeed, it was almost sold to the USA by President Benito Juárez. This initiative was cancelled only once *General* Porfirio Diaz became president: on the contrary, he ordered the establishment of several local garrisons for the protection of the Territory.

Ideologically, Cantu Jiménez was actually an autonomist enjoying wide authority and the Federal government rarely issued any kind of orders to him. Since taking over in 1915, he had taken care to bolster the economic development and by 1920 had achieved stability and security of the region even at the times when Mexico was going through one of its most violent periods. During the first years of the Mexican Revolution, the peninsula was the scene of invasions by filibusters and a failed communist rebellion that led to the naming of several military governors. Subsequently, Baja California – the only remaining productive state in the country – found itself exposed to several conspiracies by people interested in establishing themselves in power instead of Cantu Jiménez. Some of the related accusations were truthful, others not, but there is no doubt that they instigated the decision of De la Huerta's government to remove Cantu Jiménez from his office.

De la Huerta saw Cantu as a threat to his government, since Cantu could rally to his territory all the surviving *Carrancistas* to challenge his government and cause a delay to the upcoming presidential elections, in which, Obregón was to become the next president for the term of 1920–1924.

Certainly enough, the government of the northern Territory of Baja California was not to give up easily. Cantu Jiménez was a successful administrator who had constructed the local road and telegraph networks, schools, factories, workshops, an aviation school, the fishery fleet, several casinos, a racetrack, and numerous bordellos in Mexicali and Tijuana. All of these were earning a handsome income from a growing number of American tourists and investors. This resulted in a financially healthy and wealthy state, with a strong economy – vastly different to the rest of Mexico. In view of growing tensions with De la Huerta, Cantu thus found it relatively easy to organise his own defence forces – 'just in case' of an attack by the Federal Army. Being close to the US border, he managed to acquire some aircraft and tried to recruit several US, British or Canadian pilots to fly them.

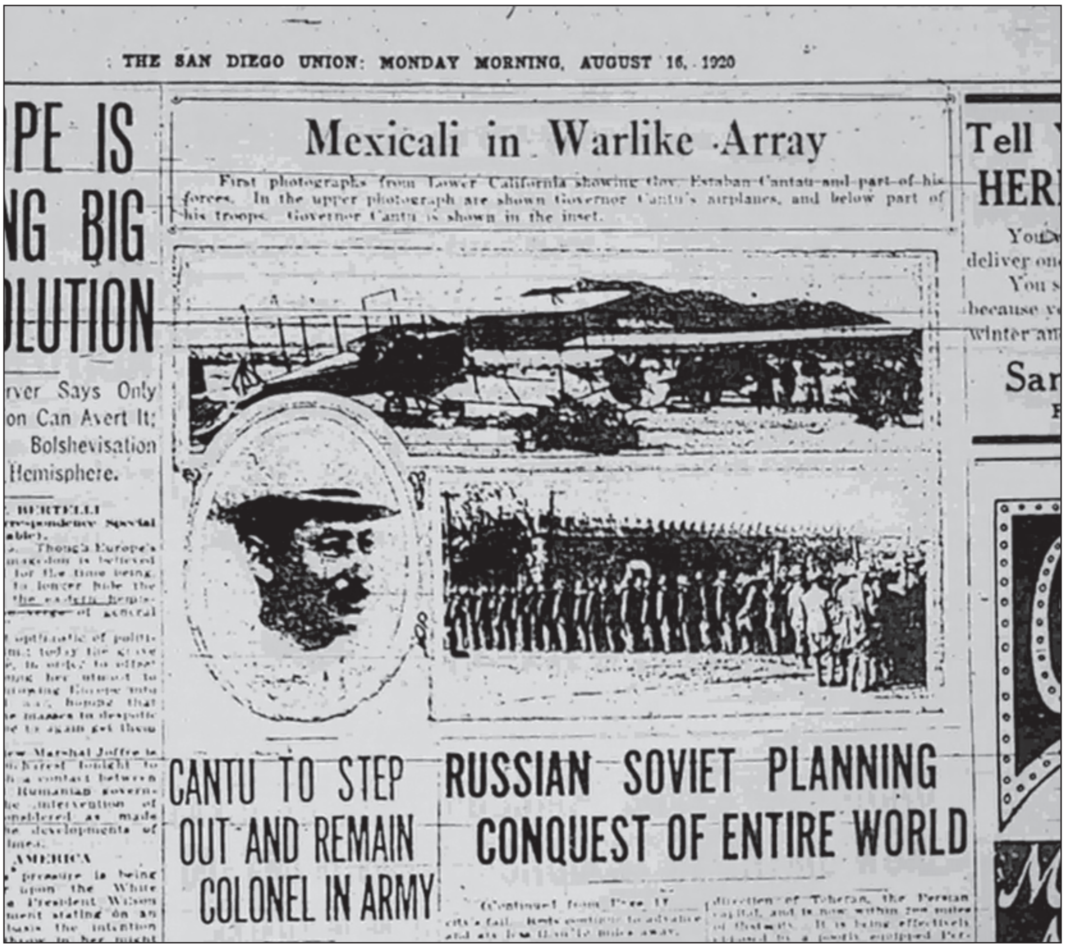
Coronel Esteban Cantu, the military governor of the northern part of the Territory of Baja California, who was a threat to the new government, because he could rally many of the exiled *Carrancistas*. (Author's collection)

PABLO DATO JR., cuñado
del Coronel Cantú.

The only known photograph of Pablo Dato Jr., *Coronel* Cantu's brother-in-law, a pilot who organised the aviation element of his armed force. (*Compendio Historico Biografico de Mexicali*)

Aviation-Minded State

Thanks to the investment from the USA, and through the control of gambling in the area known today as Lower California, Cantu Jiménez and his supporters prospered immensely. Unsurprisingly, the governor was quick in informing himself about the advantages of aviation. Because no records of this service are left – and many other details about this little-known uprising still remain obscure – the only way to reconstruct its operational history is through cross-examination of contemporary reports in the US press, and some



THE SAN DIEGO UNION: MONDAY MORNING, AUGUST 16, 1920

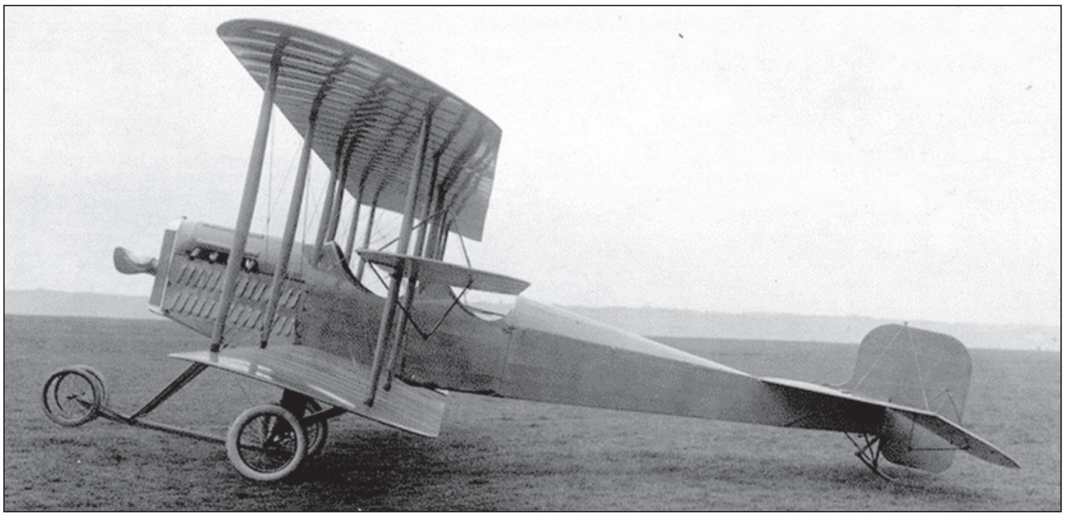
Mexicali in Warlike Array

First photographs from Lower California showing Gov. Estaban Cantau and part of his forces. In the upper photograph are shown Governor Cantu's airplanes, and below part of his troops. Governor Cantu is shown in the inset.

CANTU TO STEP OUT AND REMAIN COLONEL IN ARMY

RUSSIAN SOVIET PLANNING CONQUEST OF ENTIRE WORLD

Front page of the *San Diego Union* from 16 August 1920 showing the preparations of *Coronel* Cantu to face the Federal forces sent to subdue him. The top photo shows a Martin Model TT No. 50 and a Curtiss JN-2 Jenny biplane reportedly with *Coronel* Cantu. (San Diego Public Library)



A Martin Model TT as operated by the United States Air Service before the First World War. As of the early 1920s, some were still in service and based at San Diego. (San Diego Air & Space Museum)

deduction. For example, on 27 May 1920, while the rest of Mexico was still busy with the fall of Carranza, Cantu 'officially' announced the establishment of an aviation school to the US press:

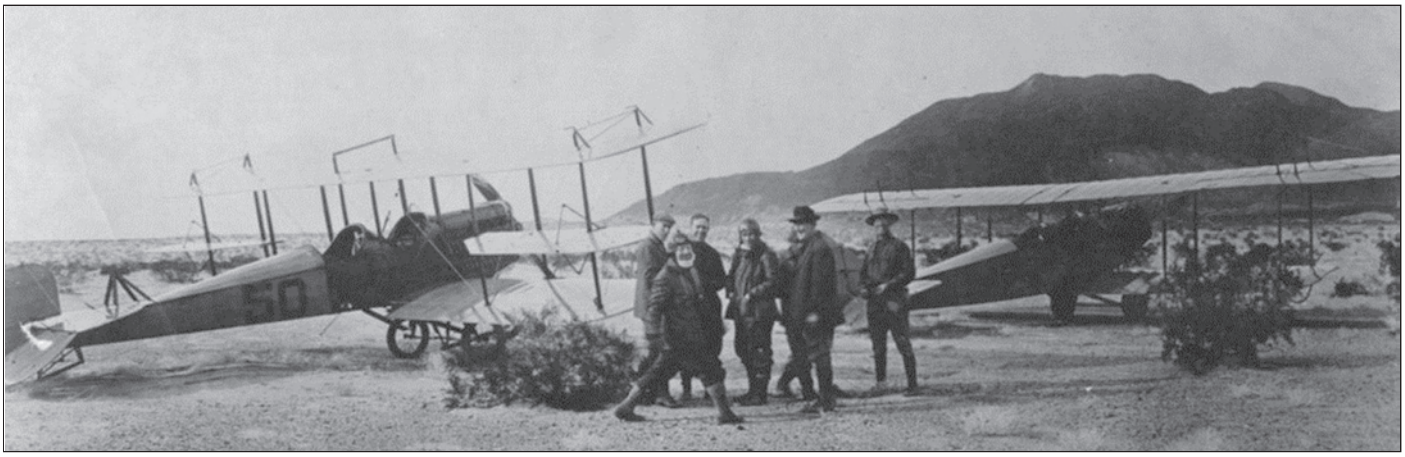
> Calexico, Cal. May 26, --- Governor Esteban Cantu of the Northern district of Lower California plans to establish a military aviation school at Mexicali, just across the Mexican border from Calexico, according to an announcement made here today. The announcement was coincident with the arrival here of two airplanes recently purchased by Governor Cantu. Special permission from the state department at Washington was obtained for their passage into Mexico.

Another, more detailed account in the US newspapers mentioned that Cantu had purchased two biplanes made by Curtiss. These were two JN-4Ds, bought from the Chaplin Aircraft Corporation in Los Angeles, and then flown to Mexicali by Erwing G Diess and T. P. Payne in a flight that lasted 3.25 hours.

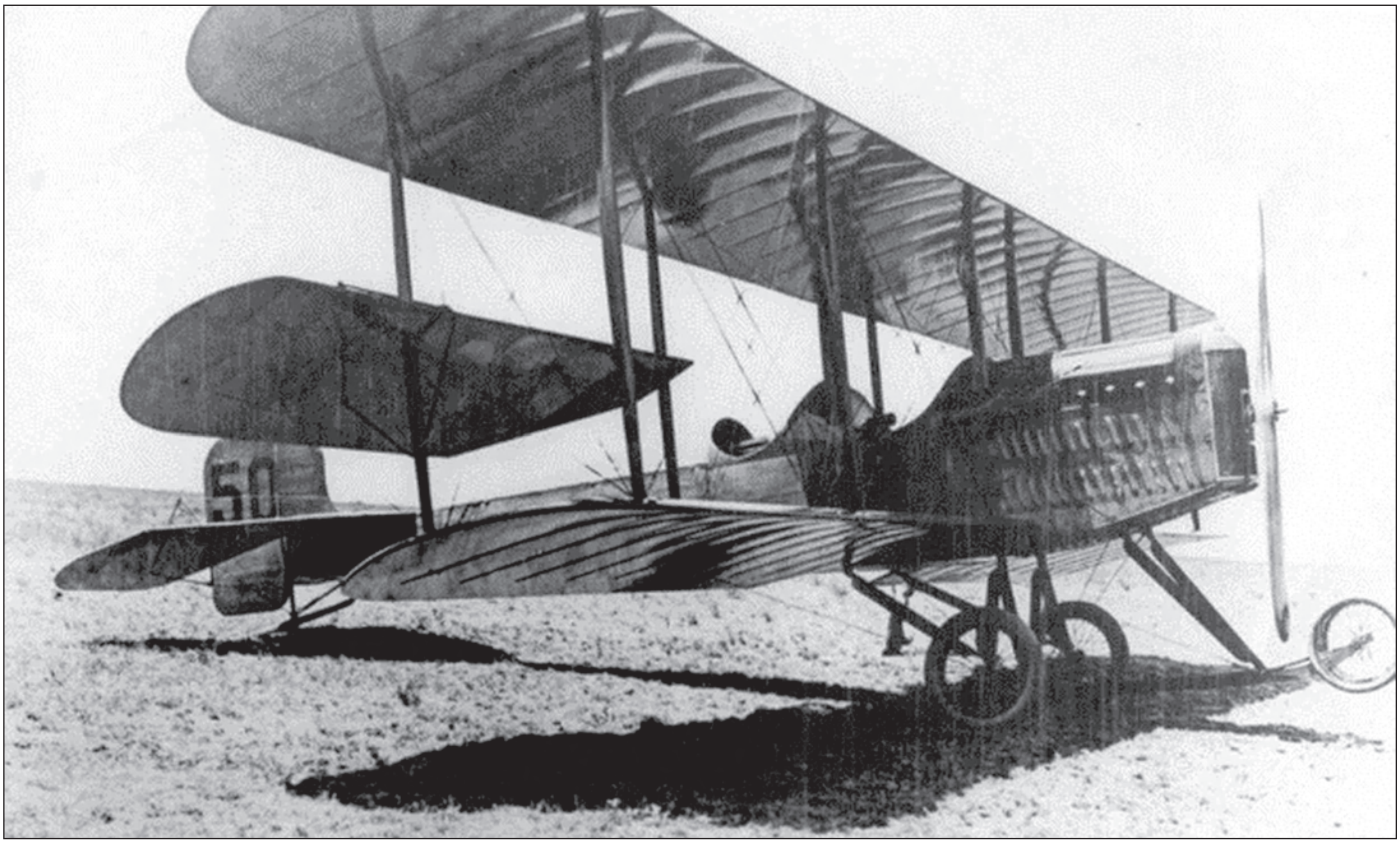
During recent newspaper research, an article in the *Los Angeles Evening Express* from 19 June 1920 was found, mentioning that Cantu purchased two Curtiss JN-4Ds, with OX-5 90 horsepower engines, for an airmail service. Both of these aircraft were acquired from Chaplin Aircraft Corporation, which – if this is correct – means that Cantu had a total of four Curtiss JN-4Ds at his disposal. Of course, it is possible that not all of them were operational at the same time.

Much more problematic to positively identify were a few other aircraft reportedly operated by Cantu's forces around the same time – and the principal reason for this is the lack of Mexican accounts, as well as unreliable reporting by the US press and US officials. For example, a report from the State Department of 19 February 1919 claims that the governor of the northern Territory of Baja California had some success in obtaining aircraft from the Martin Aircraft Company of Los Angeles California. Amongst others, he had purchased six Martin Special aircraft and contracted several US pilots. The aircraft were necessary for attacks on Federal forces that might approach the territory.[1]

Unsurprisingly, all of this does not make it easy to determine what exactly that 'Martin Special' was: based on available information, it was a Martin Model S, two-seat biplane trainer – of the same type as a Model TT that had been sent to Mexico in 1915–1916 to serve with the Division del Norte of General Pancho Villa: by that time, all the Model Ss (six examples) and TTs (17 aircraft) had served with the Aviation Section of the US Signal Corps, while the US Navy



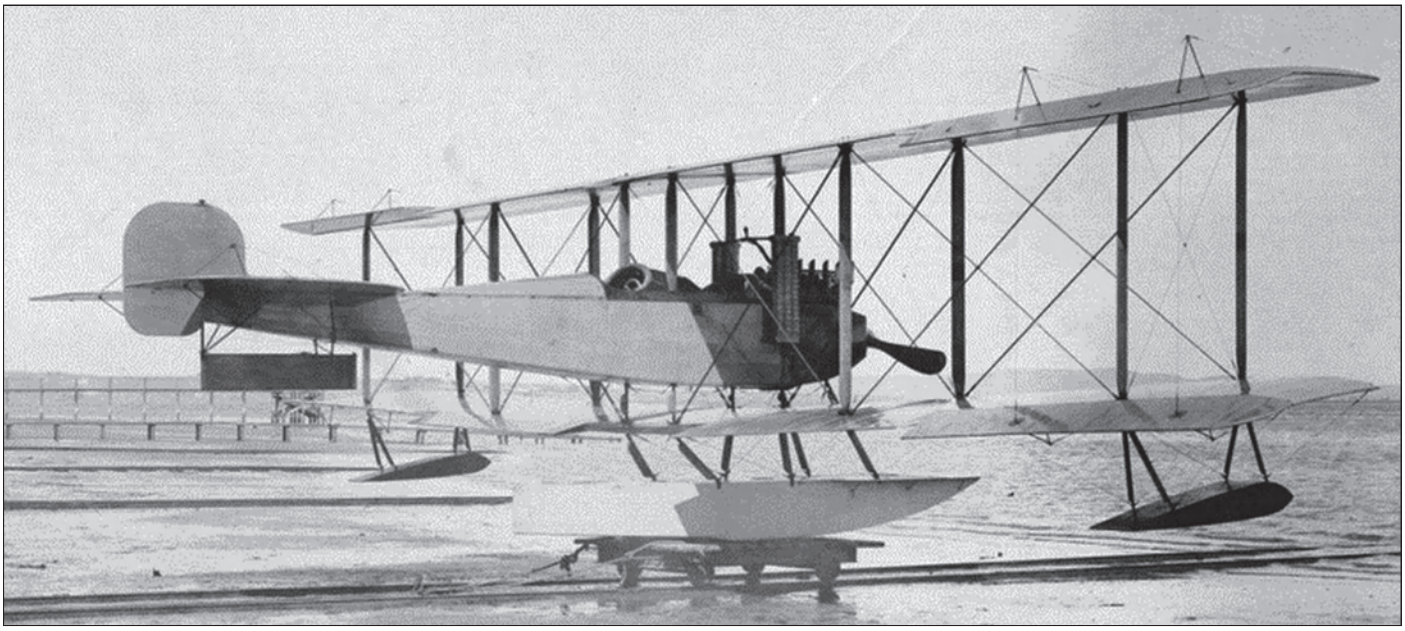
Another photograph from the same newspaper from 16 August 1920. The caption dated this photograph back to 1917, supposedly in relation to missing American pilots in Baja California. However, most likely, it was taken in relation to efforts related to cooperation with Cantu. (San Diego Air & Space Museum)



A Martin Model TT No. 50 shown in the previous photo – now equipped with a radio station and supposedly linked to Cantu. (San Diego Air & Space Museum)

acquired two Model Ss and three Model Rs. A photograph published in the *San Diego Union*, on 16 August 1920, reportedly showed Cantu's forces in the process of preparing for a confrontation with the Federals, including two aircraft: a Curtiss Jenny and a Martin Model TT, but with unusual riggings on the top wing and near the vertical stabiliser.[2] This poses the question on how did Cantu manage to get one?

At first glance, the most plausible answer is that out of 25 such aircraft acquired since 1914, one ended up in the Martin Flying School while two were sold to private customers – one of whom was a former USAS pilot that later worked for Cantu. The conclusion is thus that he brought his aircraft with him. However, further research has revealed that this photograph was taken in November 1916 at Rockwell Field, California: in other words, US journalists simply used an old photograph to illustrate Cantu's aircraft. This photo was first used to 'Illustrate the rescue aircraft' on 17 January 1917, when flight instructor Captain W. A. Robertson and his passenger Lieutenant Colonel Harry Bishop of the US Army Field Artillery, took off from Rockwell Field for an unauthorised flight to Yuma, Arizona. They lost their way and landed in Baja California, well inside Mexico. Of course, a search party was promptly sent in that direction – this time in cooperation with the Mexican authorities. Eventually, both men were found and rescued after spending four days in the desert. Bishop continued to serve until his retirement in 1934 (with the rank of *Mayor General*, and in charge of the Field Artillery). Correspondingly, it can be discounted that Cantu ever had a Martin Model TT operated by his force.



Another Martin-made aircraft Cantu reportedly wanted to acquire was the Martin Model S, here shown in a floatplane version. (San Diego Air & Space Museum)

Woes of a Mercenary Air Service

As the tensions between Cantu and the Federal government continued to increase, the maverick governor mobilised his army. Effectively, this comprised about 1,000 men including 683 infantry and 415 cavalry, a machine gun section, and a squadron of aircraft: they were well-equipped and organised, highly disciplined, had good morale, good supplies of ammunition, and were in possession of superior knowledge of the local territory. Cantu's force was completed by a 'squadron' of aircraft for which additional personnel were recruited and, according to reports in the *New York Times* from 29 July 1920, up to 1,000 aerial bombs were manufactured locally. Additional reports from the same day indicated that the aircraft and a large part of the ground troops were then redeployed to the port of Ensenada, and ordered to await the arrival of Federal forces, and that it was expected that 'scout planes equipped with bombs' commanded by Cantu's brother-in-law, Paul Dato, would be manned by US 'experts', scout for advancing Federals, report their positions and numbers, and attack them with bombs. The same article commented that Cantu was to use guerrilla tactics and harass the enemy all the way to Tijuana and Mexicali, if necessary. Furthermore, it observed that the Federal government attempted to secure support from the US government, but Washington said no. Ironically, reports from the next day indicate that no Federal troops had yet been sent in that direction.

In reality, Cantu was aware that, while in possession of advantages like local support, his supplies were limited, and the effectiveness of his force depended on hiring US citizens with combat experience from the First World War. Actually, his sole advantage was based on the fact that Baja California is a very arid area, and his forces were in control of the principal urban areas – and thus all the water sources. Unsurprisingly, Cantu first attempted to negotiate with Mexico City, seeking to find an agreement for him to stay in power as a governor.

While negotiations were going on, Cantu did his best to acquire additional aircraft from the USA. Amongst others, he managed to get four Curtiss JN-4 Jennies, prompting the San Diego press to report the presence of 'three scout planes, not armed' as of 3 August 1920. Actually, Cantu was now negotiating for the acquisition of seven additional Curtiss aircraft from the USA, while his agents did manage to obtain a quantity of materials necessary to make bombs. Later on, US intelligence reported that Cantu had managed to hire two US pilots. One of these was John Goree, a former flier with the USAS, veteran of the First World War, and an instructor from March Field, outside Riverside, in California. Another was Cantu's brother-in-law, Paul Dato, mentioned in the press as 'in charge of the aircraft and pilots.'

Of course, the press in the USA was having a field day, publishing one report after the other. Accordingly, the Federals were already marching against Cantu. Indeed, on 2 August, the headlines read: 'Cantu Airplanes hunt Foe at Sea as Mexican Envoy seeks agreement'.

Actually, this report was merely related to Cantu's order for his aircraft to be redeployed to Ensenada, rather than any signs of Federal forces, or any ships transporting them. Nevertheless, the same report was interesting for providing the following strength of *Coronel* Cantu's forces:

> In the garrison across the line today there were reported 200 infantrymen and 200 cavalrymen, a detachment of twenty odd machine guns and a squadron of four airplanes…. Aviators are reported as being offered $100 a day, with machine gunners $50 a day, and private soldiers $25 a day by Cantu. These men are said to be American ex-service men. They are paid daily and are not required to drill, nor are they subjected to guard or police duties …

On 3 August 1920, the *San Diego Union* followed with a report that T. O. Payne was now under contract with Cantu:

> T. O. Payne, former United States Army aviator, now said to be under contract with Governor Cantu to aid him in repelling the invasion, has been denied a permit to bring an airplane across the international boundary to Mexicali. It was announced here tonight by Walter F. Boyle, an American Counsel. Payne, it was said, went to San Francisco last Wednesdays, and it's reported to have bought a large bombing plane for Governor Cantu, making the purchase before he applied for a permit. Consul Boyle said he had received a message from Washington informing him of the denial of the permit.

Moreover, another report indicated that one of Cantu's aircraft undertook a reconnaissance mission on the search for the Federal forces. Payne very much flew an aircraft from to Mexicali, even overflew the latter town, but then landed on the US side of the border, where he was quickly surrounded by a group of soldiers who promptly denied him the right of recrossing to the Mexican side. Nevertheless, the US press went on, and on 4 August 1920 the *Sacramento Union* reported: 'Yank Flier with Plane for the Rebels will be stopped at Border'. Once again, reality was significantly different: while Payne was prevented from joining Cantu's forces – first by his own mistake, other US pilots were contacted, but flatly refused to become involved. One of the latter was Lieutenant Colonel William Thaw – one of the founding members of the notable *Lafayette Escuadrille* (N124/Spa124) – a unit of the French air force entirely staffed by US volunteers during the First World War. The *San Diego Union* reported about him:

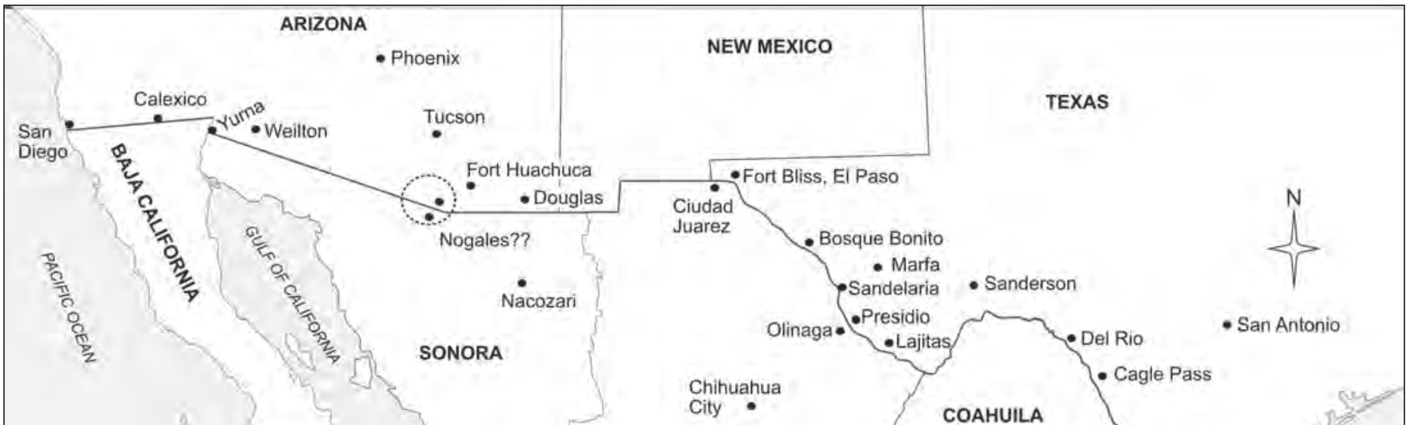
> ORGANIZER OF ESCADRILLE NOT TO JOIN CANTU FORCES
>
> DENIES REPORT HE IS ABOUT TO FORM SQUADRON OF AMERICAN AVIATORS TO CROSS BORDER; SAY HE HAS HAD ENOUGH WAR TIME FLYING IN THREE YEARS.
>
> Lieut. Col. William Thaw organizer and commander of the famous Lafayette escadrille and a noted ace will not organize a squadron of American flyers to assist the army of Governor Cantu in the event of a clash between Cantu's followers and the Mexican federals. Colonel Thaw who is at the Hotel del Coronado told a Union reporter yesterday morning, that there was absolutely no truth in the report that he was about to cross the border accompanied by five of his former Lafayette Escuadrille associates all aces. I have all the wartime flying I want said the Colonel Thaw. Three years of aerial fighting on the western front should be sufficient for any man, it is certainly enough for me…

Certainly enough, Thaw not only denied any involvement with Cantu, but also expressed his hope the US government would not take away his passport. The article in question did include one interesting bit of information, nevertheless: this was the notion of the 91st Aero Squadron, back then based at Rockwell Field.[3] Equipped with de Havilland DH.4s and commanded by Major Henry 'Hap' Arnold (who gained fame while leading the US Army Air Force during the Second World War), the 91st was deployed at Rockwell in anticipation of hostilities in northern Mexico, and reinforced to double the number of aircraft usually assigned to it. Its primary task was patrolling the border between Tijuana and Yuma, and two such flights were made daily. Officers and other ranks of the unit went as far as to announce that any aircraft crossing the US border between Tijuana and Yuma would be intercepted and forced to return into Mexican airspace: only civilian aircraft would not be prosecuted.

One of many veteran pilots reportedly linked to *Coronel* Cantu was the former Lieutenant Colonel of the USAS, William Thaw (a veteran of the famed *Lafayette Escadrille*). He is known to have visited San Diego at the time of the crisis. (Authors' collection)

Initial Action

Before anything else happened, US newspapers reported that one of Cantu's aircraft and its crew had gone missing on 8 August.


ARIZONA
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Ciudad Juarez
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Sandelaria
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Nacozari
Presidio
Olinaga
Lajitas
Del Rio
San Antonio
SONORA
Cagle Pass
Chihuahua City
COAHUILA
CHIHUAHUA
Laredo
Zapata
Guerrero
McAllen
Brownsville
NUEVO LAREDO
Tampaulias

Tensions along the border between the USA and Mexico prompted the US Army Air Corps to fly regular border patrols to prevent any kind of trouble spilling over from the southern neighbour into US territory. (Map by Mark Thompson, based on USAF Historical Department)

A line-up of de Havilland DH.4B two-seat observation and attack aircraft that were the primary mounts of border patrols. (San Diego Air & Space Museum)

While the type was never precisely mentioned, it was certainly one of three Curtiss JN-4 Jennies. The crew was named, nevertheless: John Goree Jr. and Fred Dato, were described as making a forced landing about 75 miles south of Mexicali. Payne – who had received special permission from the US authorities to fly a search mission – eventually located, evacuated and brought Goree and Dato to safety with the help of the local population. The *Air Services Aircraft Journal* of 4 October 1920 reported:

> **Ex Air Service Pilots have Exciting Experience**
>
> Mr. John Goree Jr, ex-March Field pilot who was reported lost in Lower California over last weekend, has returned to his home in Riverside California. He is through flying for Governor Esteban Cantu. Following his return to Mexicali, U.S. Immigration authorities told him he would have to give up his citizenship if he remained in Governor Cantu's domain and employ much longer. He decides to return across the border. Goree, was employed as an instructor and was on a cross country flight with Paul Dato, brother-in-law of Governor Cantu. A forced landing in marsh land 80 miles south of Mexicali resulted in a broken prop and abandonment of the ship. Two days later Goree and Dato returned to Mexicali with an interesting story of their experiences.

Unsurprisingly, Cantu was still trying to recruit more airmen. The same report went on:

> …governor Cantu bids fair to acquire the services of an ex-British pilot who is also well known at March Field, having been employed here, by the Curtiss Company in re-building old Jennies for commercial sale. His name is C.S. Parr he has seen service in Mesopotamia and Egypt with the Royal Air Force. Parr according to Associated Press dispatches is ready to give up his American passport if Governor Cantu can make an attractive offer.

On 7 August, new reports were published by the US media, indicating an escalation of the situation:

> CANTU AND MEX.FORCES FIGHTING REPORTED IN MEXICO CITY.
>
> Aug. 7. Fighting between federal forces and Col. Esteban Cantu has broken out in Lower California, telegrams from there stated today. American aviators are said to be helping the rebel forces.

Correspondingly, Cantu's forces clashed with Federalists in the town of Colorado, strategically located at a point between the states of California and Sonora. Cantu's aircraft were also involved, but only flew reconnaissance missions: obviously, the governor was keen to find out if the local garrison remained loyal to him or to the Federalists. The Mexican newspaper *El Universal* reported on 8 August:

> **An Aerial and ground combat in Baja California**
>
> Yesterday news was received from the presidency of an aerial and ground combat registered at Colorado B.C. Two aircraft from Cantu in their mission to prove if the small garrison that protect Colorado a strategic point between Baja California and Sonora, made reconnaissance over this place. They dropped propaganda leaflets and were received by fire from the garrison under the command of Mayor Araiza. Then the aircraft bombed the place, without success, because their shots did not score any hits.'

Clearly, Cantu's JN-4s had dropped some of the homemade bombs, but without any success. In turn, the ground fire hit neither of the two aircraft involved. Considering such reports it is unsurprising that the US aviators serving for Cantu came under severe pressure from the US government, as reported in a news story published in the *San Diego Union*, on 9 August 1920:

> Mexicali Mex. Aug.9 American aviators who join Cantu forces in Lower California will be exile by their country. American Consul Walter Boyle at Calexico has announced. John D Goree, American pilot instructing Cantu men in flying has been ordered back over the border at once with the penalty for refusal as announced. Reports from Mexico City say that two airplanes believe to be part of Cantu's forces exchanged shots with the government garrison at El Colorado. This is given little credence here, as well-informed persons say Cantu has but two planes and if Goree leaves the governor will have no one remaining capable of flying.

Only a day later, the same daily seemingly rushed to publish an outright denial of any kind of an exchange of fire:

> CANTU PLANES DID NOT FIRE ON FEDERAL TROOPS
>
> CALEXICO Aug.10, Official denial of reports from Mexico City that Cantu airplanes had fired on Mexican Federal troops, was contained in a statement issued by headquarters of Governor Esteban Cantu of Lower California at Mexicali, this afternoon. Federal emissaries reported in route here to confer with Governor Cantu had not yet arrived today. No negotiations of any sort were under was its said.

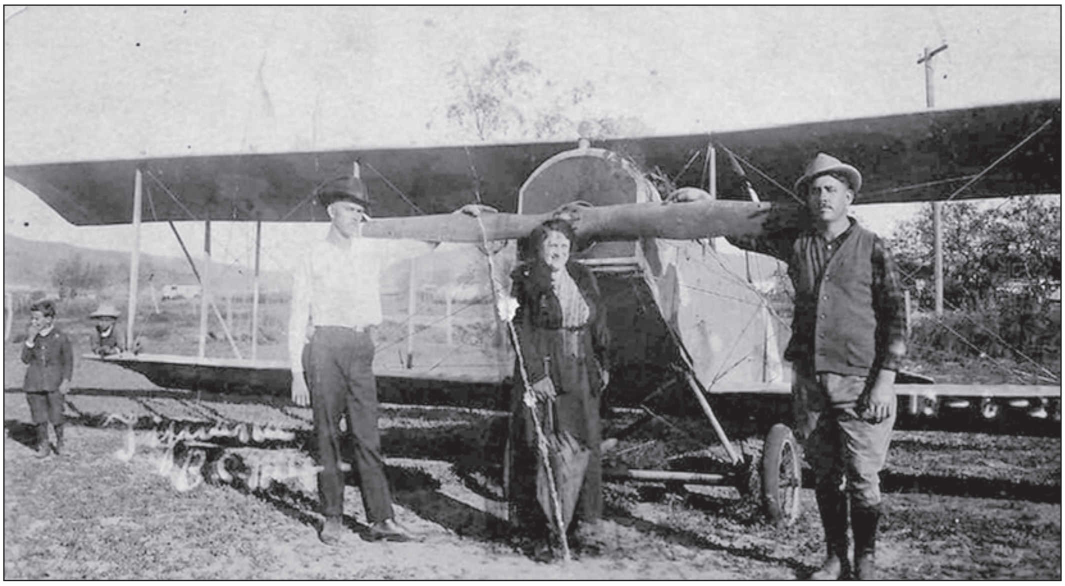
On the same day, John Goree is known to have returned to the USA: once there, he reported to the press that he was 'only working with Cantu to earn money to prove up a land claim in Arizona… (and) helping to train Mexican pilots.' Interestingly, Gore said that Cantu had 'three to four aircraft,' 'all flown by Mexicans,' but otherwise mentioned nothing about the circumstances in Lower California: he only observed that he did not consider the situation to be serious, and believed no fighting would occur.

That the pressure upon US aviators that joined Cantu continued to rise was obvious from a report published in the Mexican daily *Universal* on 13 August 1920:

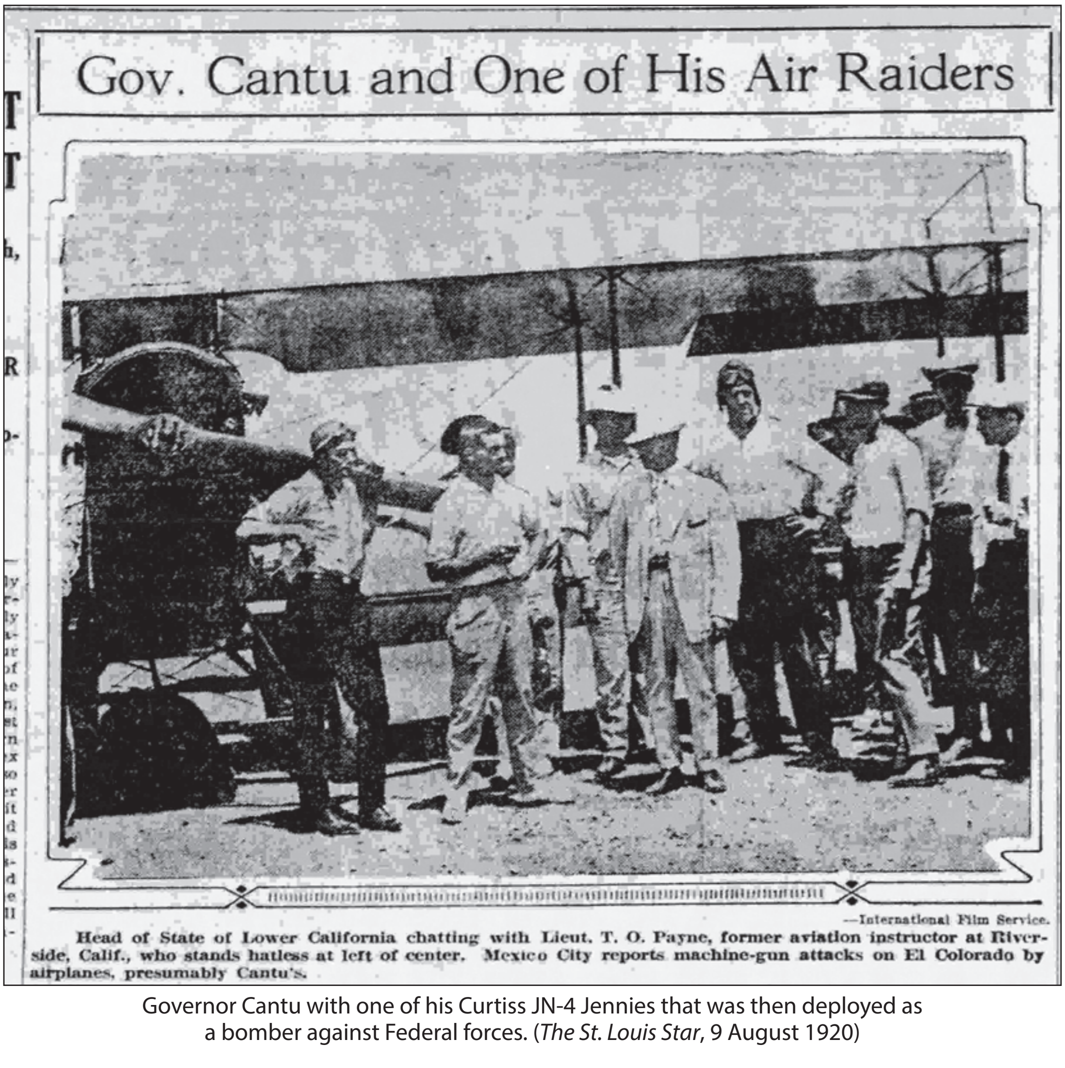
> **Passports taken away from Aviators**
>
> According to information from the secretary of Navy and War of the United States, the government of the neighbouring republic has taken away the passport of the American pilots that were going to join the forces of Cantu, thus preventing the rebels from being reinforced by personnel to fly its aircraft and deploy them against the government troops.

In the USA, the *Riverside Daily* carried a short story on one of Americans that did join the maverick governor:

> LIEUT "TOP" PAINE WORKING FOR CANTU
>
> Lieut. "Top" Paine formerly of March field, is still in the service of the Cantu government, according to advice received from a reliable source. An ex-aviator of the United States government,



A rare photo of a Curtiss Jenny operated by Cantu's forces, taken at Tijuana Baja California, probably around the time of the crisis. (Navarette Marco Collection)



Gov. Cantu and One of His Air Raiders

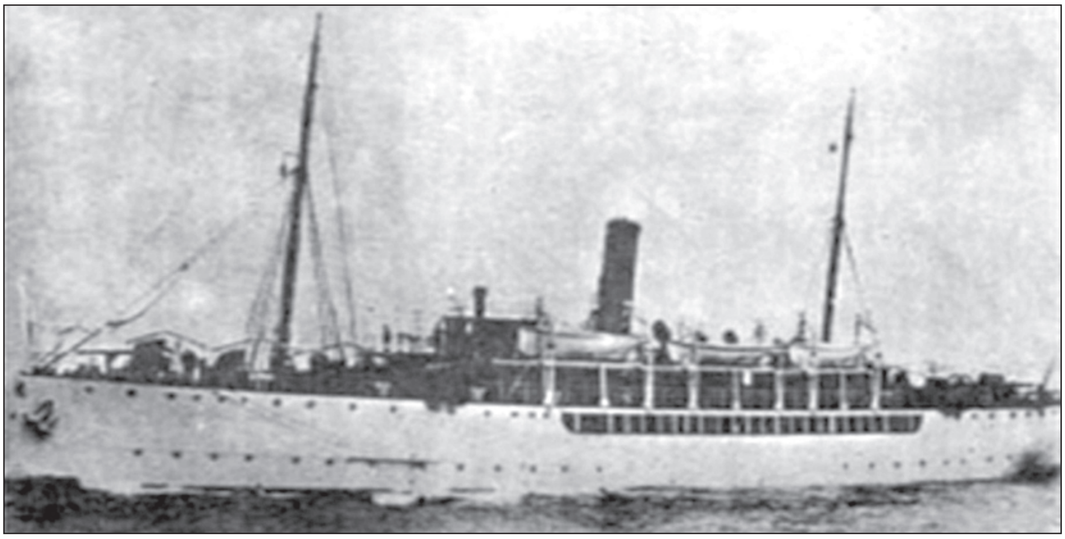
—International Film Service.

Head of State of Lower California chatting with Lieut. T. O. Payne, former aviation instructor at Riverside, Calif., who stands hatless at left of center. Mexico City reports machine-gun attacks on El Colorado by airplanes, presumably Cantu's.

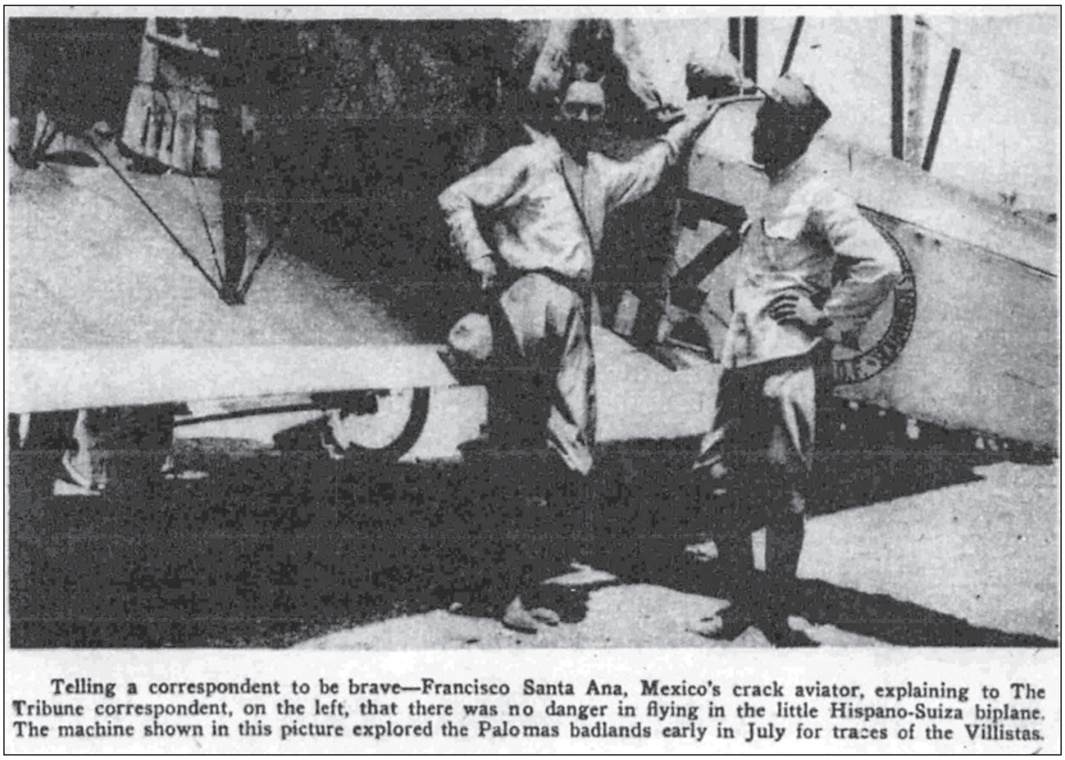
Governor Cantu with one of his Curtiss JN-4 Jennies that was then deployed as a bomber against Federal forces. (*The St. Louis Star*, 9 August 1920) whose name is withheld stopped off here last night in route to Los Angeles. From the sources it was learned that Lieut. Paine is drawing down a salary of $900 in gold a month, from the Cantu government for his service as an aviator. This is the Lieutenant's peace time pay from the governor of Lower California. Paine a few days ago was stripped of his passport and told to remain on this side of the border. So far as can be learned he has obeyed the ruling of the United States government officials. However, he was permitted to cross and make the search for Paul Dato and John Goree, the latter of this city, who were forced to make a landing and abandon their plane. They were reported lost. Since Paine made this flight, he has been in Calexico and the report is that he is still in the service of Cantu.

In similar fashion, on 29 August, the Mexican press reported that the passports of all the US pilots – and one Briton named Barr – trying to join Cantu had been confiscated, to prevent them from crossing the border to Mexicali. Reportedly, the man in question, variously named as 'Major Parr' or 'Barr', was a veteran military pilot from Canada, who had forfeited his US passport. The *San Diego Union* reported:

> An English aviator named Barr who has been held at Calexico, California by United States immigration authorities, who told him his passport would be taken up if he crossed the line, today notified them "go ahead and take it up" if they saw fit, as he intended to cross into Mexicali and remain. It was said his arrival would give Colonel Cantu an experienced airman capable of giving advance instruction as well as doing scouting himself.



One of the ships of the Mexican Navy deployed in the operation against *Coronel* Cantu was the armed transport *Guerrero*. (SEMAR)



Telling a correspondent to be brave—Francisco Santa Ana, Mexico's crack aviator, explaining to The Tribune correspondent, on the left, that there was no danger in flying in the little Hispano-Suiza biplane. The machine shown in this picture explored the Palomas badlands early in July for traces of the Villistas.

Pilot Carlos Santana talking to a US reporter during the search for last *Villista* rebels in July 1920. The MAS still flew outdated aircraft – like the TNCA Serie A biplane visible here – while Cantu was acquiring JN-4s. (*Chicago Tribune*, 29 August 1920)

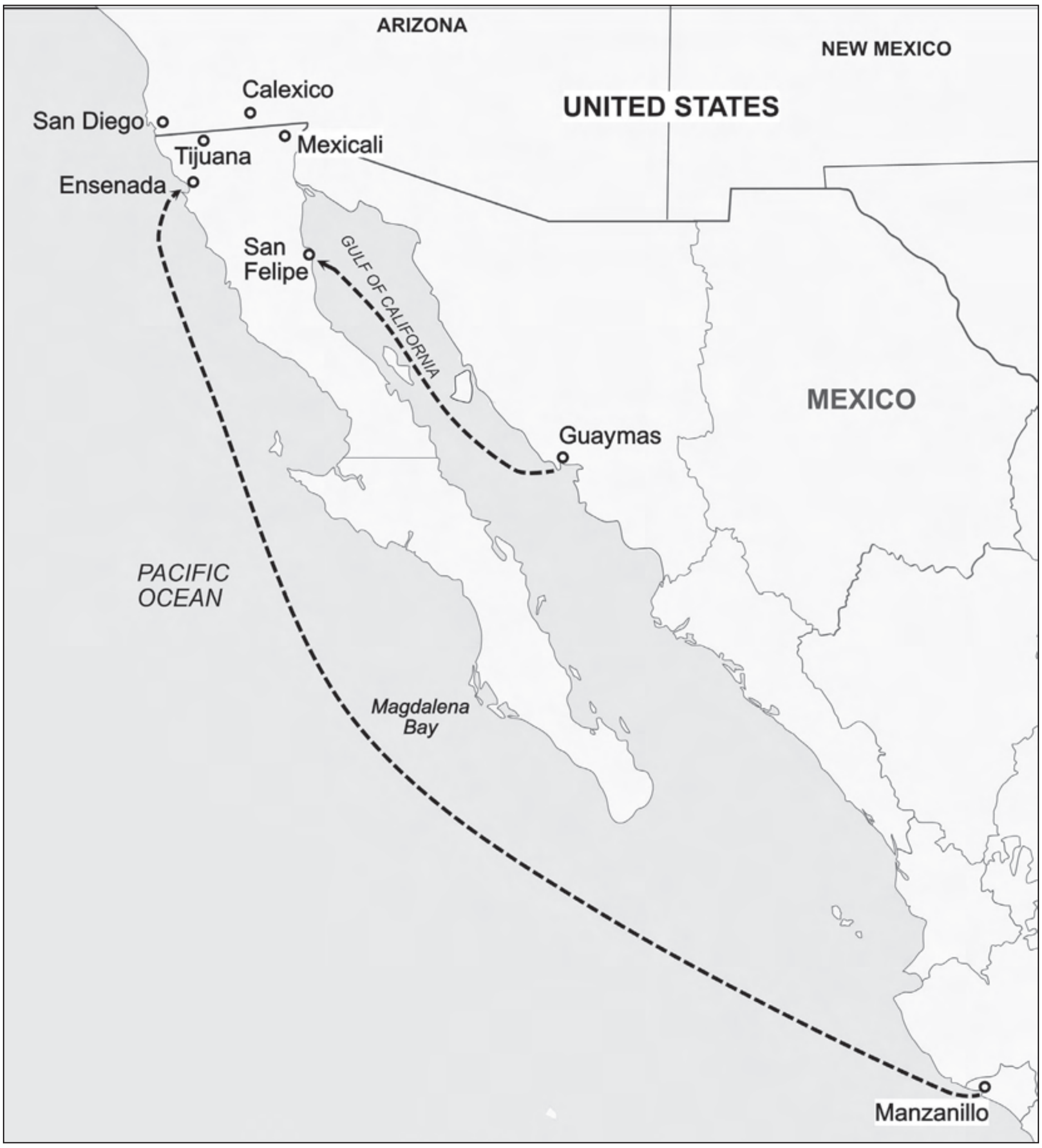
Federal Preparations

Meanwhile, Federal Army units were marching on Baja California and on 11 August, the *San Diego Union* reported:

TO SEND PLANES AGAINST CANTU

MEXICO CITY Aug.11.- The first Escuadrille of the Mexican air service is to be brought into action to put down the rebellion of Esteban Cantu governor of Lower California, according to an official bulleting issued today. The Escuadrille, which is stationed at Jimenez Chihuahua has been ordered to Irapuato. It will be enlarged into a mixed flotilla consisting of four reconnoitering [sic] machines and four pursuit planes and two bombers. The flotilla will be divided into two Escuadrille which will operate simultaneously. On will have its headquarters on the pacific and the other at Altar, state of Sonora near the Lower California boundary. The operating radius will be 125 miles from each base, which distance can be covered in one hour. All the machines are equipped with machine guns. Capt. Alfonso Virgen will command.

In turn, the Mexican press reported that Calles – the Secretary of War and Navy – was at Balbuena Airfield to supervise and select the best



Based on a map published in contemporary US newspapers, this map shows the pincer movement the Mexican Federal forces planned to oust *Coronel* Cantu from Baja California. Obviously, most of this counterattack was to be conducted through amphibious landings – one at San Felipe and the other at Ensenada. Eventually, the landing at San Felipe was abandoned and the Federals advanced along the coast via Puerto Penasco (opposite San Felipe on the eastern coast of the gulf) to Algodones (a little to the east of Mexicali). However, the landing at Ensenada was supported by another one further north, which resulted in the Federals securing Tijuana. (Map by Manuel Reyna Garza and Mark Thompson)

aircraft to be deployed. The aircraft selected for action against Cantu's force seem to have included the TNCA Serie A biplanes and Serie H Parasols, and perhaps also Farman F.50Bn2 bombers: none was armed with machine guns, but all could carry small bombs. The officer put in charge of the combined unit (designated the *Flotilla de Operaciones*), was *Capitán* Alfonso Virgen Mesa, who belonged to the first generation of Mexican military fliers, joining the service back in November 1915. Other pilots assigned to the unit were Fernando Proal and Ramiro Rojas

While the Federals were still preparing their offensive, the small-scale action in the north went on. On 14 August 1920, two of Cantu's aircraft – both believed flown by US pilots – overflew the garrison of El Colorado. With the latter now certainly turning out to be loyal to the Federal government, another exchange of fire was reported but, once again, no hits were scored. Other news indicated that Cantu's aircraft also flew reconnaissance, searching for advancing columns of Federal troops, including some that had already landed on the Baja California peninsula. Two days later, on 16 August 1920, the Federal garrison of San Luis, in Sonora, proved much more successful, as reported by *Somerton*, a daily published in Arizona:

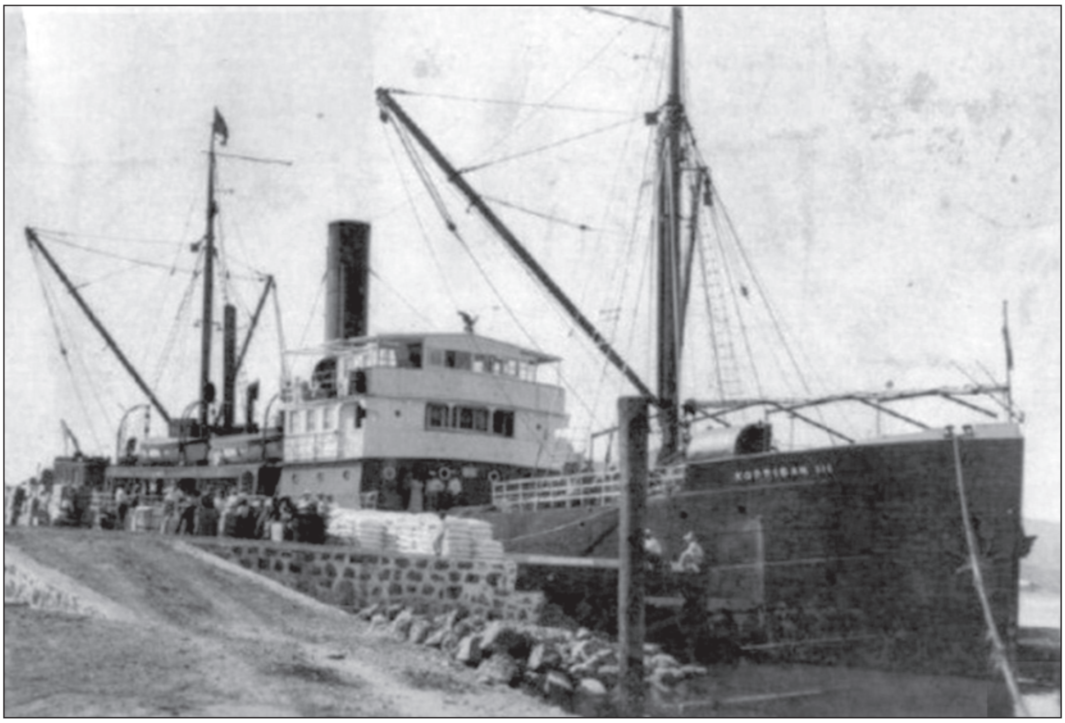
> Mexican federal troops at San Luis, Sonora, late yesterday shot down an airplane supposed to have been scouting for Governor Cantu of Lower California, according to reports reaching today. The plane is believed to have been smuggled across the international border line from Phoenix, Arizona. It was disabled by rifle fire of the federal soldiers and forced to land across the Colorado River in Lower California, reports here said.

What exactly happened in that case, and the fate of the crew, were never reported.

The officer appointed the command of the expedition against *Coronel* Cantu was the recently-promoted *General Brigadier* Abelardo L. Rodriguez. He went on to serve as a military governor and then an interim president of Mexico. (Authors' collection)

Quick and Easy Victory

On 20 August 1920, De la Huerta ordered an all-out attack on Cantu's forces. Commanded by *General* Abelardo L. Rodriguez, the Army contingent deployed for this expedition included the 4th Line Battalion and the 54th Infantry Battalion: all together

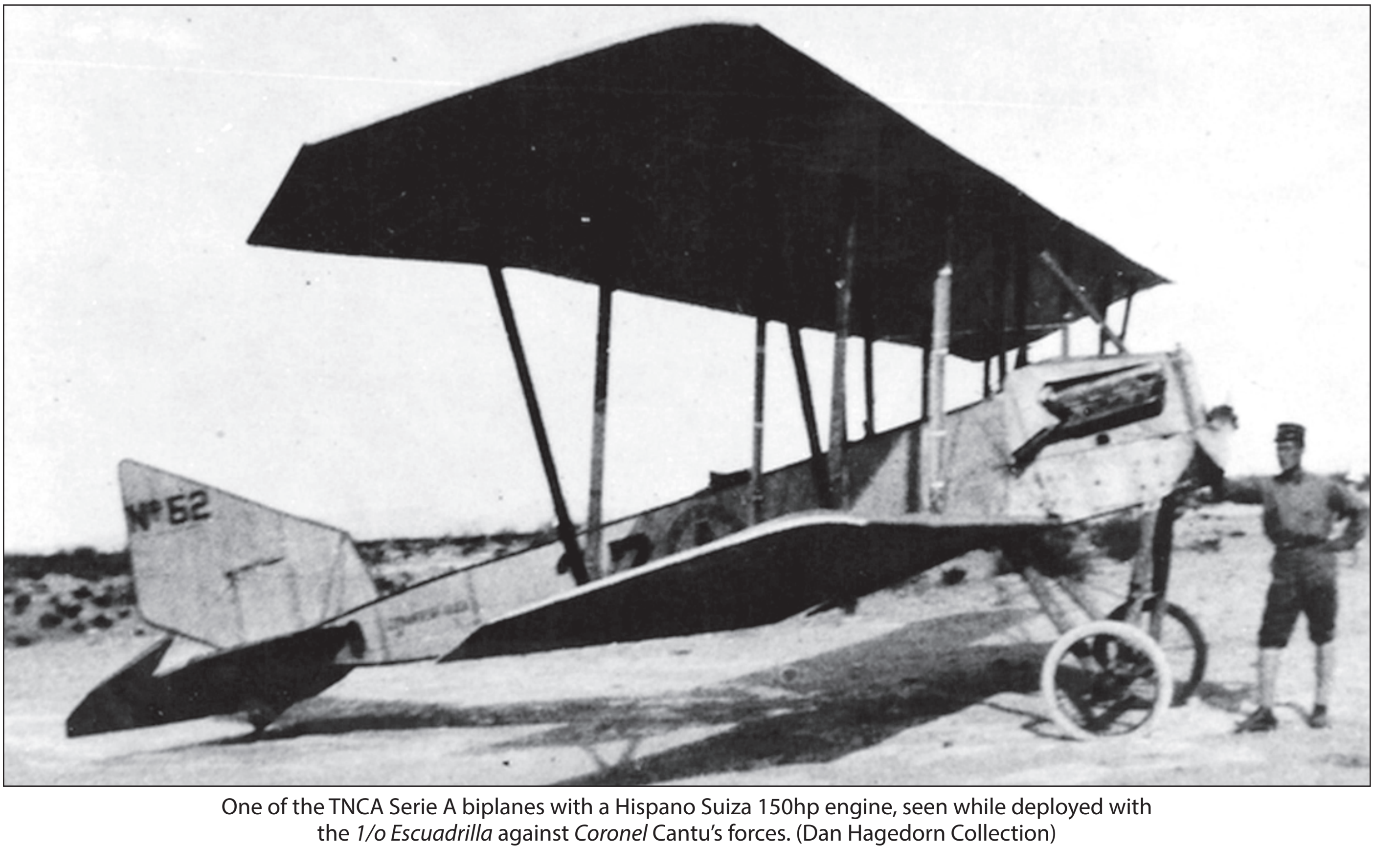


One of the merchant vessels used to ship the expedition to Baja California was *Korrigan III*. (via Manuel Reyna-Garza)

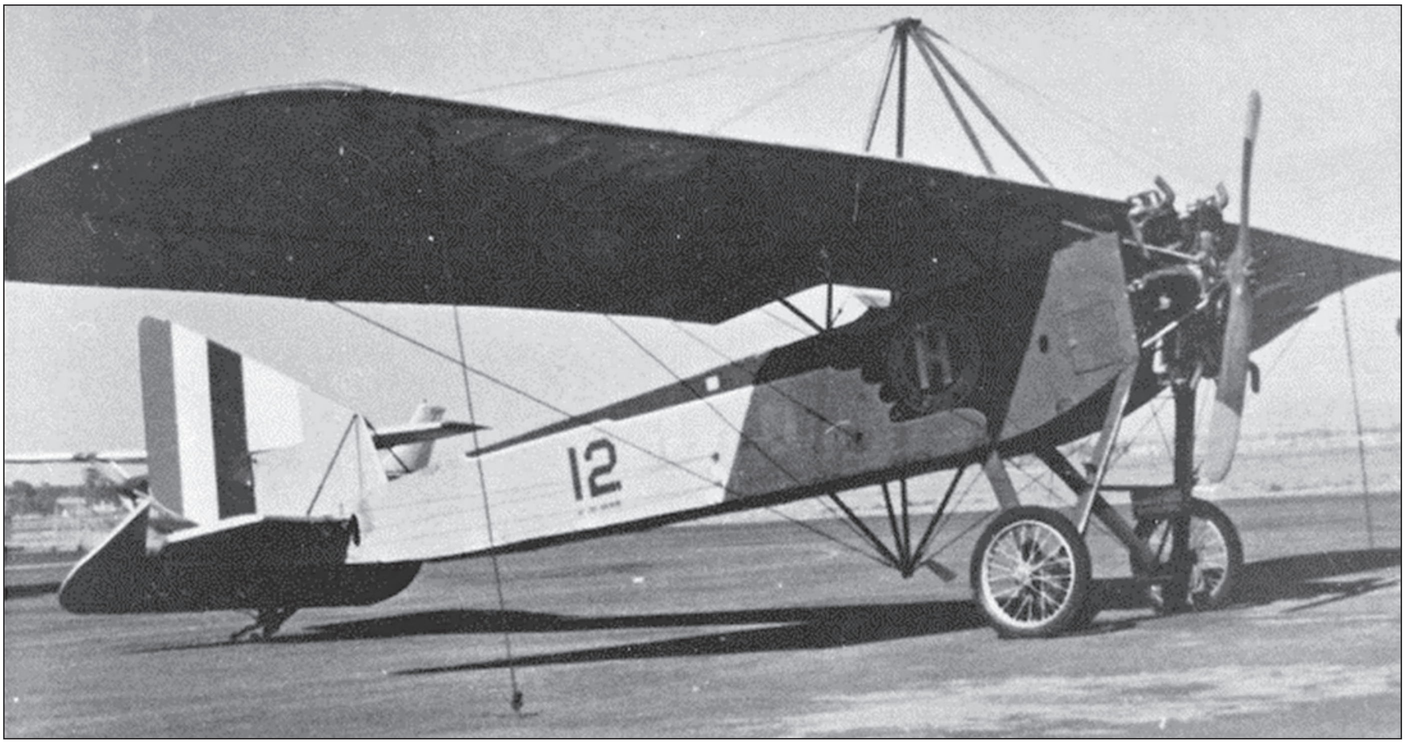
5,965 infantrymen and 45 cavalry troops, supported by the above-mentioned combined squadron including two TNCA Serie A biplanes (both with Hispano Suiza engines), one TNCA Serie H Parasol (with Aztalt engine), and a Sopwith 1½ Strutter biplane.

Provided with supplies for four months, the Federals first travelled by two military trains from Mexico City to Manzanillo, in Colima, where they were split into two and ordered into a two-pronged attack. One column embarked *Bonita* and *Korrigan III*, two merchant ships, and the gunship *General Vicente Guerrero* with the aim of landing at Punta Banda, El Sauzal, and Tijuana, securing the port of Ensenada, and border crossings in the Tijuana area, thus cutting off Cantu from possible reinforcements and supplies from the USA. The eastern column was meanwhile to advance from Manzanillo via Mazatlan to Guaymas and San Luis Rio Colorado, in Sonora, with the aim of attacking the rebel garrison of Ejido Los Algodones. From there, it was to continue for Mexicali, the rebel capital. The balance of troops – distributed in several minor units – was deployed to cut off the communication links between Tijuana and Mexicali, and thus keep the rebels in the dark. Virgen's unit was assigned the task of supporting the latter part of the operation.

Although some have subsequently declared that the rebel force included 'fighter aircraft', actually, not a single attempt is known to deploy its two JN-4s (later just one) in air combat. At most, they flew about a dozen 'armed reconnaissance' sorties. Correspondingly, regardless how limited the combined squadron commanded by *Capitán* Virgen might have been – and how worn out and obsolete its aircraft were – its fliers were free to operate. Initially, its crews flew



One of the TNCA Serie A biplanes with a Hispano Suiza 150hp engine, seen while deployed with the *1/o Escuadrilla* against *Coronel* Cantu's forces. (Dan Hagedorn Collection)



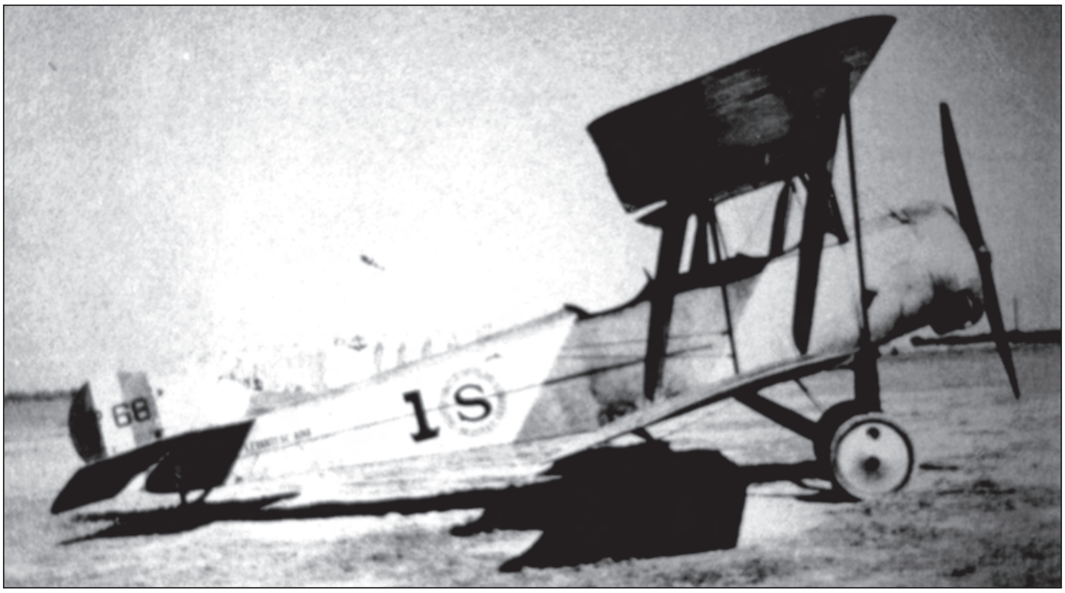
Another aircraft deployed by Federals against *Coronel* Cantu was the TNCA Serie H Parasol. This example survives today in the Mexican Air Force Museum at Santa Lucia Estado de Mexico. (Ing. Adolfo Villasenor Collection)

reconnaissance in order to find out enemy positions. Subsequently, they began bombing the rebel garrison of Ejido Los Algodones. That was also about all the Federal aviation needed to do, then the troops that landed at Punta Banda, El Sauzal, and Tijuana, quickly secured the port of Ensenada on 26 August 1920: following a gun battle lasting about two hours, the Cantu garrison raised the white flag and surrendered. What a 'battle' this must have been is indicated by the fact that the official biography of *General* Rodriguez – presented to the Mexican Senate in 2003 – does not even mention any combat with Cantu forces: most likely, some of the rebel units were never informed about the quick collapse of the government in Mexicali to the east.

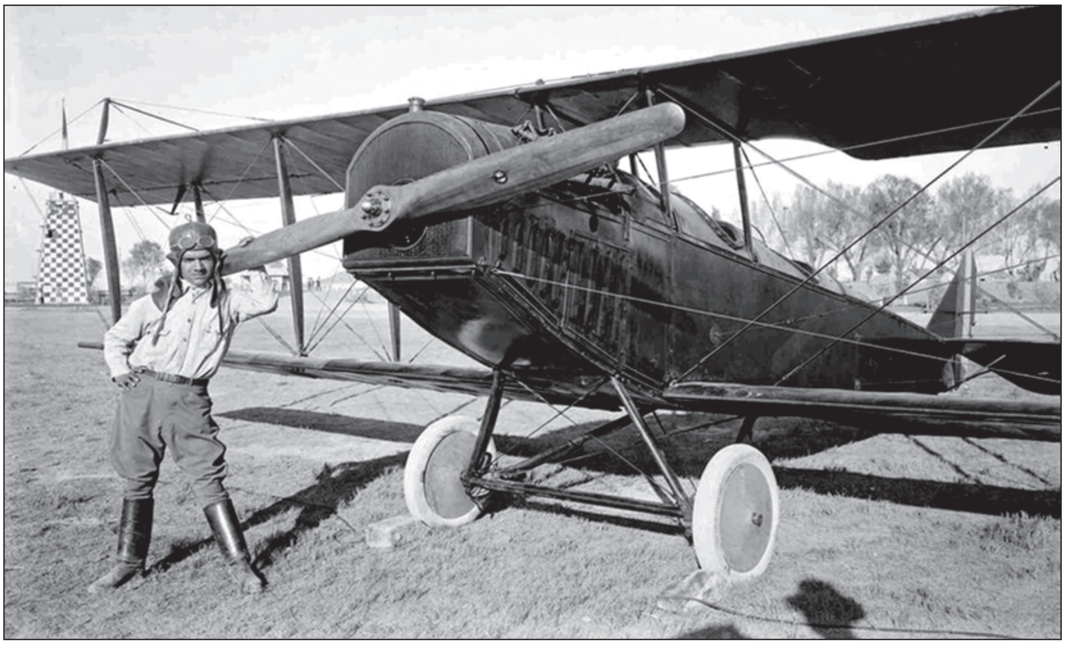
Unsurprisingly considering the collapse of his forces and rapid advance of the Federals, Cantu stepped down as governor on 18 August 1920. Ironically, the Federal troops reached Mexicali only on 1 September, granting him enough time to leave for Los Angeles in the USA.[4] Certainly enough, the situation did not stabilise promptly: even once Cantu had left, some rebel groups remained active, and a number of their raids on Tijuana and Tecate were reported later during the year. Therefore, in 1922, the Federal government deployed additional troops to the area, which was completely pacified only in 1922.

Lessons Learned

During their advance on Mexicali, the Federal forces were lucky to secure two of Cantu's JN-4s: to the surprise of Mexican military fliers, these proved to be much more advanced than anything available in the country at the time, having superior flight controls and instruments, and advanced flight characteristics. An unsurprising result of this experience was a report filed by Ponce de Leon after this offensive, in which he demanded urgent acquisition of modern aircraft. Of course, Ralph O'Neill vocally supported him, as did *Capitán 2/o* Rafael Ponce de León, Director of the Military Flying School – who had previously sent a letter to *General* Calles, providing a detailed description of the poor state of most of the aircraft still operational, and even demanding that none of these were to be deployed in combat. Ponce de León knew that their service life had reached its end and their crews needed not only



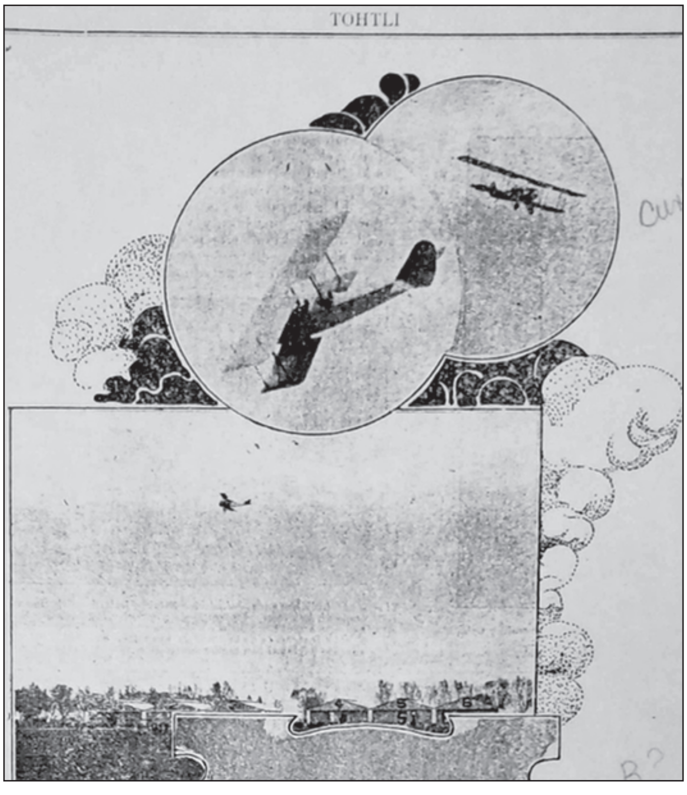
This photograph shows the only Sopwith 1½ Strutter that arrived in Mexico following the events of May 1920. It remains unknown where it came from, or who purchased it, and it is not certain that it took part in the campaign against *Coronel* Cantu's forces. (Ing. Enrique Velasco Collection)



The three Curtiss JN-4s that were captured from the rebels were transferred to Mexico City and used at Balbuena airfield by the Mexican Military Aviation. (Ing. Enrique Velasco Collection)

improved training, but also to learn new tactics. Of course, the quick collapse of Cantu's force, and the fact he turned out not to have any aircraft capable of shooting down Federal airplanes, did not help make all the problems go away: nevertheless, the government in Mexico City proved satisfied with reports about Virgen's aircraft providing support for ground forces on numerous occasions, and thus playing their part in prompting the rebels into a quick surrender. Thus, the actual problems of the Military Aviation Service remained the same as before. Unsurprisingly, as soon as the campaign was over, de León warned about all the issues: about Mexican-built aircraft being worn out after years of intensive service and proving hopelessly inadequate to face modern aircraft of the 1920s; and about the need to acquire foreign aircraft – foremost fighters – to compensate for this problem. He requested the necessary authorisations and resources and proposed a schedule of two months to acquire new aircraft. However, his plan was never realised: all the flying service received were three Curtiss Jennies bought by Cantu: they were reported as assigned to the Aviation School, according to the magazine *Tohtli*, as of November–December 1920. Equipped with Curtiss 90-100 horsepower engines (all acquired from the USA), the three Jennies were first given maintenance at the workshops: apparently, only two were pressed into service, one of which had a

From left to right: *Teniente* Carlos Santana, *Capitán* Rafael Ponce de León, an unknown civilian, and *Teniente* Fernando Proal. De Leon would later file a report to the Secretary of War and Navy about the sad state of equipment of the MAS to face Cantu's aircraft. (Ing. Enrique Velasco Collection)



This page from the Mexican aviation magazine *Revista Thotli* apparently shows aircraft given to the MAS via *Coronel* Cantu, while in flight over Balbuena Airfield. Notably, there is no mention of any Martin Model TTs. (*Revista Tohtli*)

Secretary of War and Navy *General* Plutarco Elías Calles (middle), with a group of pilots and officials in front of the Farman F.50Bn2 *República Mexicana* at Balbuena Airfield. *General* Calles would receive the report on the poor state of military aviation. (Ing. Enrique Velasco Collection) modified wingspan, while another was lost in a fatal accident. They were in use until 1927–1928.

The fourth aircraft acquired during this period was a Lincoln Standard L.S. originally owned by Cantu and picked up a crew from the Military Aviation Service from Mexicali including Guillermo Ponce de León and José Yanez in January 1921. The two pilots were commissioned to fly the aircraft to Balbuena, where it was incorporated into the service: reportedly, the L.S. arrived there on 26 January, equipped – according to contemporary press reports – with a Hall Scott engine. Following maintenance checks, it was assigned to pilot Fernando G. Proal for a flight from Mexico City to the Port of Acapulco. However, ultimately, this aircraft was donated to the Republic of El Salvador: on 16 December 1922, it was transferred by *Capitán 1/o* Class Humberto Aberli, a Salvadorian, from the State of Chiapas to El Salvador in the course of a flight lasting four hours and 55 minutes.[5]

3

DE LA HUERTA REBELLION, 1923–1924

Following the triumph of the *Plan de Agua Prieta* of May 1920, Adolfo de la Huerta held the interim presidency of the republic, supported by Álvaro Obregón Salido and Plutarco E. Calles. Adolfo de la Huerta was in power from 1 June until 30 November of that year, when Obregón was appointed a new president. However, towards the end of his term, when it was necessary to call the next presidential elections, the Constitutionalist Liberal Party – based on the *Plan de Agua Prieta* – split into two factions: into *Obregónistas*, who supported the candidacy of Calles, and the *Delahuertistas*, who supported their favourite, De la Huerta. The rivalry eventually escalated into another armed uprising: this time by Obregón's own comrades in arms. In reaction, he ordered a reform of the entire country, which included a reorganisation of 20 existing military zones into 35, with the aim of establishing better control over local military and political leaders, while downsizing the armed forces under their control.

On 7 December 1923, in the port of Veracruz, De la Huerta made an announcement against the Obregón government. By

President Álvaro Obregón was about to end his term in office when he selected *General* Plutarco Elías Calles over Adolfo de la Huerta as his successor. (*Instituto Nacional de Antropología e Historia*)

General Plutarco Elías Calles, whose election as the next president of Mexico cause the break-up of the Sonora Group. (*Instituto Nacional de Antropología e Historia*)

The Secretary of War and Navy as of 1923 was *General de Division* Francisco R. Serrano. He had fought under Obregón during the revolution, and his fate would depend on Obregón in 1927. (*Instituto Nacional de Antropología e Historia*)

The former president of Mexico and later the Federal minister of finances, Adolfo de la Huerta, launched his political campaign for presidency even once Obregón selected Calles as the next president. (*Instituto Nacional de Antropología e Historia*) the time, he could count on the support of *General* Guadalupe Sánchez, commander of the local garrison, sizeable elements of the Navy home-based in ports of the Gulf of Mexico, and some of the Military Aviation Service. With this, De la Huerta had a sizeable faction of the Mexican armed forces under his control and now up in arms. Emboldened, he gave other governors and representatives of the National Congress until 15 December 1923 to make up their minds and decide whether they would like to join him. However, not all of the *Delahuertistas* were in favour of Obregón's selection of Calles as his successor: even if still customary in the early twentieth century, the famous '*Dedaso*' ('pointing with the finger') – the act of a president picking his successor, thus making any elections *de facto* pointless – experienced ever less public support.

General Salinas and Ralph O'Neil about to embark a MS.35 parasol for a flight to Pachuca Hidalgo. Busy acquiring additional aircraft overseas, they were not to see each other for a long time after. (Ing. Enrique Velasco Collection)

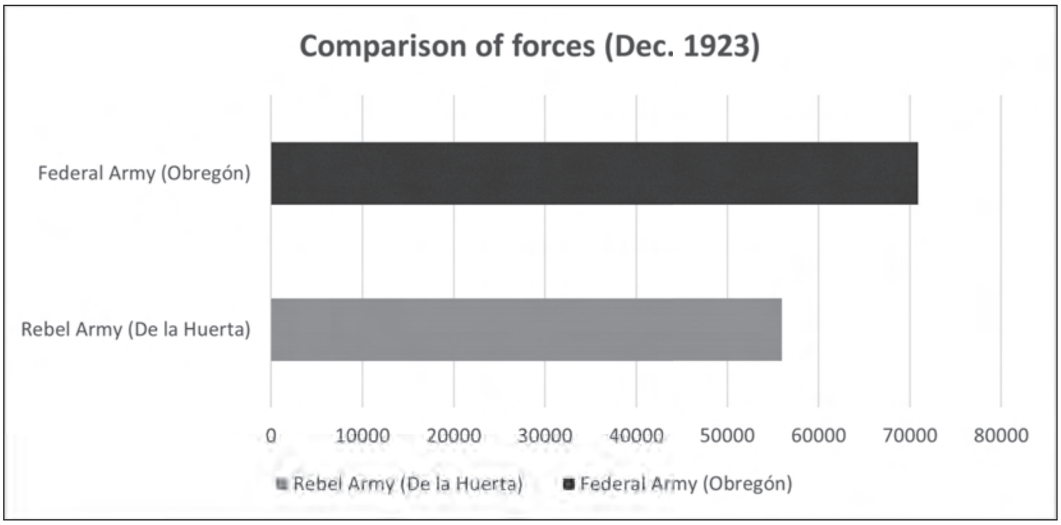
Commander of the MAS as of 1923, was *General Brigadier P.A.* Gustavo Salinas Camina, who replaced *Coronel* Ralph O'Neill after the latter's return from England, together with Avro 504 trainers. (*Revista Tohtli*)

Born in Mexico, veteran of the First World War and the USAS, Ralph O'Neil assumed the role of chief instructor pilot at the Aviation School when the rebellion broke out. He had been in Mexico since 1920, and was busy trying to modernise the service, foremost through improved training. (Ing. Enrique Velasco Collection)

Opposing Forces

As of 1 December 1923, the Mexican Army included a total of 508 officers with the rank of *General*, 2,758 with the rank of *Chief*, 8,532 other officers, and 59,020 other ranks. This was a total of 70,818 troops. From that number, no fewer than 102 generals, 573 chiefs, 2,417 other officers, and 22,224 non-commissioned ranks (25,316 troops of all ranks) joined the rebellion: that was about 35.74 percent of the Army alone. Furthermore, two infantry battalions of the Marines, elements of the Navy, and some of the Military Aviation Service also joined. Unsurprisingly, the rebels were not only numerous, but well-equipped: indeed, during early December 1923, Mexico City was surrounded by them. However, crucial to the outcome of their efforts were three strategic errors:

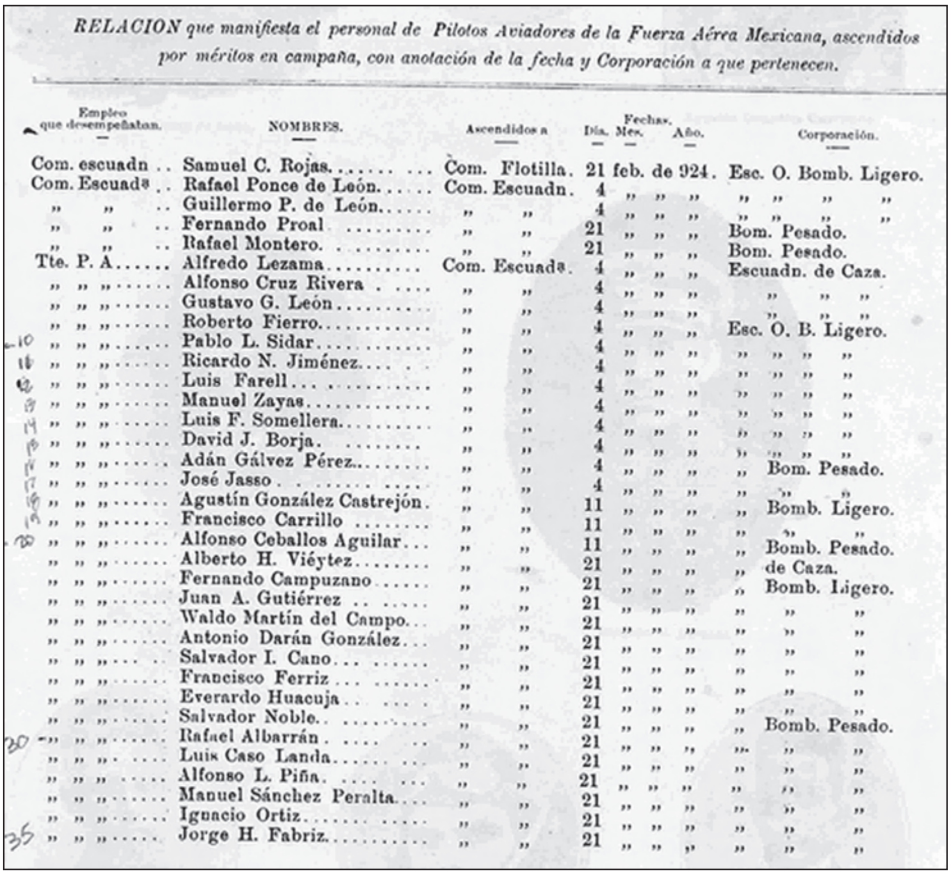
- Lack of offensive operations: although in possession of the moment of surprise, early on, and although dominating the territory around Mexico City, the rebels did not attack; instead, they hoped to negotiate a surrender of the local garrison and resignation of President Obregón.
- Problematic terrain: Mexican territory is broken and thus acts as a natural impediment to the movement of large troop



A comparison of Federal and rebel forces as of December 1923, at the start of the De la Huerta Rebellion. (Diagram by Manuel Reyna-Garza)

Report: STATUS OF THE MEXICAN AIR SERVICE BEFORE DECEMBER 1923

(Translation of an official report by the Department of Aeronautics)
Wing Commander: *General Brigadier P.A.* Gustavo Salinas Camina
Operations Commander: Lt. Col. Reynaldo L. Hijar
Airfields:
Balbuena, Mexico City
Las Juntas in Guadalajara, Jalisco and Mazatlan in Sinaloa
Air Stations:
Mexicali in Baja California
Pachuca in Hidalgo
Querétaro City in Querétaro
Tepic in Nayarit



RELACION que manifiesta el personal de Pilotos Aviadores de la Fuerza Aérea Mexicana, ascendidos por méritos en campaña, con anotación de la fecha y Corporación a que pertenecen.

	Empleo que desempeñaban.	NOMBRES.	Ascendidos a	Fechas. Día.	Mes.	Año.	Corporación.
	Com. escuadn	Samuel C. Rojas	Com. Flotilla.	21	feb. de	924.	Esc. O. Bomb. Ligero.
	Com. Escuadª	Rafael Ponce de León	Com. Escuadn.	4	” ”	”	” ” ” ”
	” ”	Guillermo P. de León	” ”	4	” ”	”	” ” ” ”
	” ”	Fernando Proal	” ”	21	” ”	”	Bom. Pesado.
	” ”	Rafael Montero.	” ”	21	” ”	”	Bom. Pesado.
	Tte. P. A.	Alfredo Lezama	Com. Escuadª.	4	” ”	”	Escuadn. de Caza.
	” ” ”	Alfonso Cruz Rivera	” ”	4	” ”	”	” ” ”
	” ” ”	Gustavo G. León	” ”	4	” ”	”	” ” ”
	” ” ”	Roberto Fierro	” ”	4	” ”	”	Esc. O. B. Ligero.
10	” ” ”	Pablo L. Sidar	” ”	4	” ”	”	” ” ” ”
11	” ” ”	Ricardo N. Jiménez	” ”	4	” ”	”	” ” ” ”
12	” ” ”	Luis Farell	” ”	4	” ”	”	” ” ” ”
13	” ” ”	Manuel Zayas	” ”	4	” ”	”	” ” ” ”
14	” ” ”	Luis F. Somellera	” ”	4	” ”	”	” ” ” ”
15	” ” ”	David J. Borja.	” ”	4	” ”	”	” ” ” ”
16	” ” ”	Adán Gálvez Pérez	” ”	4	” ”	”	” Bom. Pesado.
17	” ” ”	José Jasso	” ”	4	” ”	”	” ” ”
18	” ” ”	Agustín González Castrejón	” ”	11	” ”	”	” Bomb. Ligero.
19	” ” ”	Francisco Carrillo	” ”	11	” ”	”	” ” ”
20	” ” ”	Alfonso Ceballos Aguilar	” ”	11	” ”	”	” Bomb. Pesado.
	” ” ”	Alberto H. Viéytez	” ”	21	” ”	”	” de Caza.
	” ” ”	Fernando Campuzano	” ”	21	” ”	”	” Bomb. Ligero.
	” ” ”	Juan A. Gutiérrez	” ”	21	” ”	”	” ” ”
	” ” ”	Waldo Martín del Campo.	” ”	21	” ”	”	” ” ”
	” ” ”	Antonio Darán González	” ”	21	” ”	”	” ” ”
	” ” ”	Salvador I. Cano	” ”	21	” ”	”	” ” ”
	” ” ”	Francisco Ferriz	” ”	21	” ”	”	” ” ”
	” ” ”	Everardo Huacuja	” ”	21	” ”	”	” ” ”
	” ” ”	Salvador Noble.	” ”	21	” ”	”	” Bomb. Pesado.
30	” ” ”	Rafael Albarrán	” ”	21	” ”	”	” ” ”
	” ” ”	Luis Caso Landa	” ”	21	” ”	”	” ” ”
	” ” ”	Alfonso L. Piña.	” ”	21	” ”	”	” ” ”
	” ” ”	Manuel Sánchez Peralta	” ”	21	” ”	”	” ” ”
	” ” ”	Ignacio Ortiz	” ”	21	” ”	”	” ” ”
35	” ” ”	Jorge H. Fabriz	” ”	21	” ”	”	” ” ”

Listing the Mexican Air Force personnel that were promoted for meritorious service to the Federal government. (*Revista Tohtli*)

Units:
Escuadrón de Caza (Fighter Squadron)
Commander: Unknown, the old commander *Capitán P.A.* Julián Nava Salinas was killed in flying accident in August 1923.
Base: Balbuena Airfield
Equipment: TNCA 2-E-79 Sonora monoplane, TNCA 3-E-130 Tololoche parasol, Ansaldo A-1 Balila 1-D-79 biplane lost 12 August 1923 in fatal accident. Ansaldo A.300 reported a A5/2 D-80 Biplane, Morane-Saulnier MS.35 Parasol 7-A-99, 9-A-101, 10-A-102 and 31-A-123. It has been reported when they arrived and assembled in 1922, they were assigned to the *Escuadron de Caza*.

Escuadrón de Observación y Bombardeo Ligero (Observation and Light Bombing Squadron)
Commander: *Mayor P.A.* Samuel C. Rojas
Base: Balbuena Airfield Mexico City
Equipment: TNCA Serie B Salmson Puro 2-B-75, 3-B-89, 4-B-90, 5-B-91, TNCA 4-E-131 Quetzalcoatl, Brown Special Biplane 38-A-135, 39-A-136, Morane-Saulnier MS.35 8-A-100, 32-A Morane-Saulnier MS.35 parasol two seaters.
Reportedly, few MS.35 Parasols were transferred over to the Observation and Light Bombing Squadron before December 1923, 8-A-100 and 32-A-124 assign to this squadron. Also, the Brown Special Biplanes were also used for training as well. Colonel O'Neill used them the Brown Specials to give check rides for the pilots.

Escuadrón de Bombardeo Pesado (Heavy Bomber Squadron)
Commander: *Mayor P.A.* Alfonso Virgen
Base: Balbuena Airfield, Mexico City
Equipment: Farman F.50Bn2 twin-engine bombers: 2-F-69, 4-F-71, 5-F-76, 6-F-77, 7-F-78, 9-F-79, 11-F-95

Escuadrilla del Escuadrón de Bombardeo Pesado (Flight of the Heavy Bomber Squadron)
Commander: *Capitán P.A.* Ascensión Santana
Base: Las Juntas in Guadalajara, Jalisco
Equipment: Farman F.50Bn2 3-F-70, 8-F-92, 10-F-94, 12-F-96 and 13-F-974

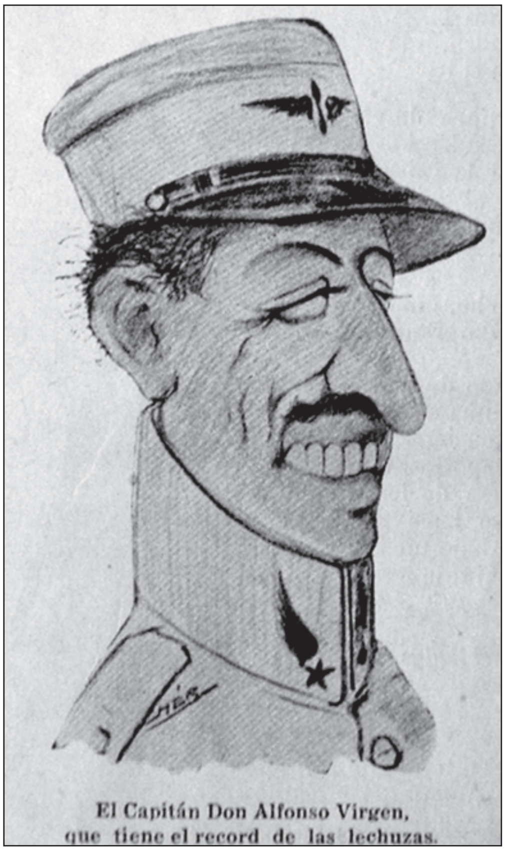
Escuela Militar de Aplicación de Aeronáutica (Military Aviation School)
Director: *Coronel* of Artillery Gustavo Bazan
Chief Instructor: *Coronel* Assimilated Ralph O'Neill
Base: Balbuena Airfield, Mexico City

Equipment Known: Avro 504K/J, 1-A-83, 2-A-84, 3-A-85, 4-A-84, 5-A-85, 6-A-88, 11-A-103, 12-A-104, 13-A-105, 14-A-106, 15-A-107, 16-A-108, 17-A-109, 18-A-110, 19-A-114, 23-A-115, 24-A-116, 26-A-118, 27-A-119, 28-A-120, 29-A-121, 30-A-122, 33-A-125, 36-A-128, 37-A-129
Brown Special Biplanes 38-A-135 and 39-A-136, and Canario civilian aircraft.
Curtiss JN-4 Jennies 1-C-73 and 2-C-74.

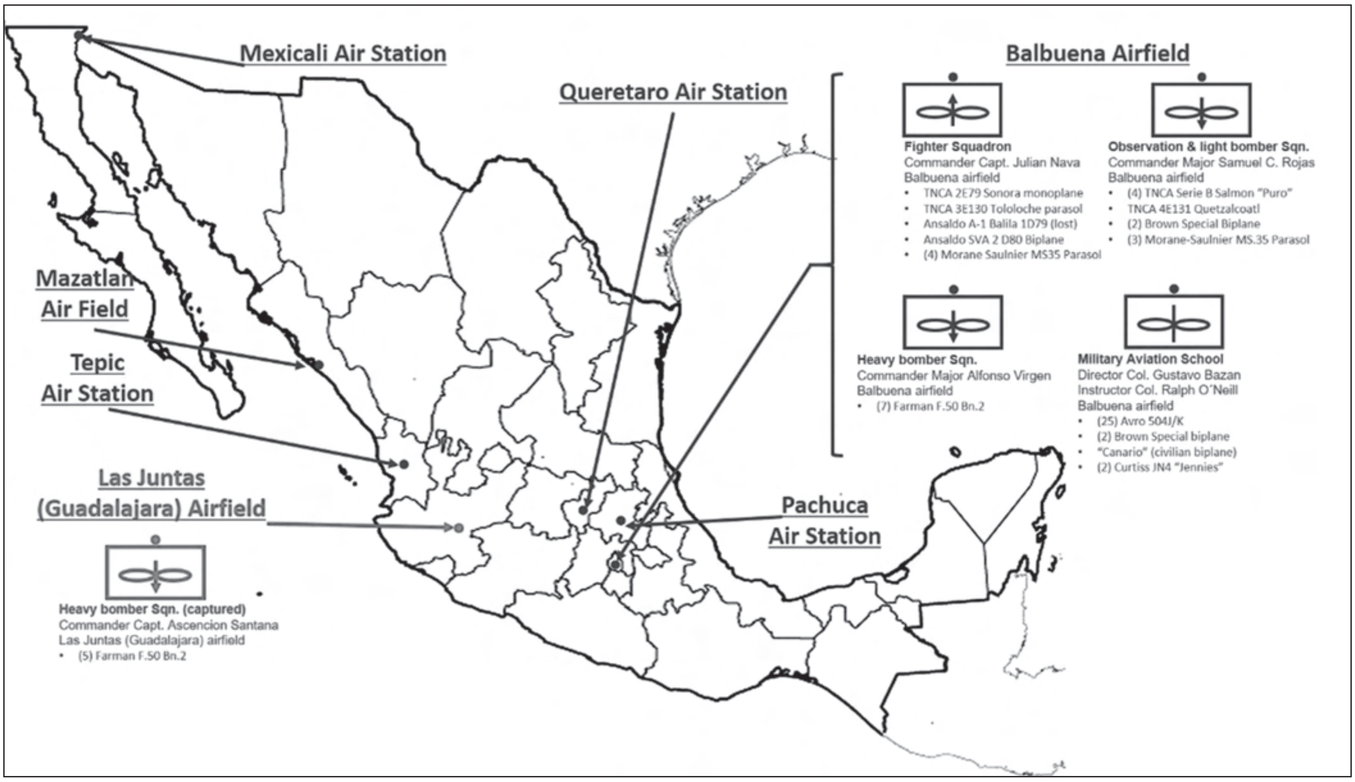
Notably, some aircraft had double function, as in the case of the Brown Special Biplanes that were also used for training. Furthermore, some of the above-mentioned aircraft had been lost in accidents. For example, one Brown Special Biplane was lost in an accident back in 1922 with fatal results. Another Brown Special was burned during a fire in the hangar, this aircraft was later recovered and repaired by Pilots Alfonso Virgen and Samuel

Rojas, for civilian use. Finally, when O'Neill took over as chief instructor of the aviation school, he implemented the Gossport system with the British-made Avro 504K/J biplane trainers in which a total of 35 Avro 504s had been reported purchased from the United Kingdom. Later they were built under license in Mexico under the supervision of *Ing.* Angel Lascurain and Osio as Avro 'Anahuacs' with a modified landing gear.

Transport aircraft: Two Junkers-Larsen JL-6 Monoplanes (1-E-81 and 2-E-82)


El Capitán Don Alfonso Virgen,
que tiene el record de las lechuzas.

Veteran pilot *Capitán P.A.* Alfonso Virgen was ordered to provide air support for the expedition against *Coronel* Cantu with a flight of aircraft to the Federal State of Sonora. (*Revista Tohtli*)


Mexicali Air Station
Queretaro Air Station
Balbuena Airfield
Fighter Squadron
Commander Capt. Julian Nava
Balbuena airfield
• TNCA 2E79 Sonora monoplane
• TNCA 3E130 Tololoche parasol
• Ansaldo A-1 Balila 1D79 (lost)
• Ansaldo SVA 2 D80 Biplane
• (4) Morane Saulnier MS35 Parasol
Observation & light bomber Sqn.
Commander Major Samuel C. Rojas
Balbuena airfield
• (4) TNCA Serie B Salmon "Puro"
• TNCA 4E131 Quetzalcoatl
• (2) Brown Special Biplane
• (3) Morane-Saulnier MS.35 Parasol
Heavy bomber Sqn.
Commander Major Alfonso Virgen
Balbuena airfield
• (7) Farman F.50 Bn.2
Military Aviation School
Director Col. Gustavo Bazan
Instructor Col. Ralph O'Neill
Balbuena airfield
• (25) Avro 504J/K
• (2) Brown Special biplane
• "Canario" (civilian biplane)
• (2) Curtiss JN4 "Jennies"
Mazatlan Air Field
Tepic Air Station
Las Juntas (Guadalajara) Airfield
Pachuca Air Station
Heavy bomber Sqn. (captured)
Commander Capt. Ascencion Santana
Las Juntas (Guadalajara) airfield
• (5) Farman F.50 Bn.2

A map depicting the deployment of the Military Aviation Service as of late 1923. (Map by Manuel Reyna-Garza) contingents. As of the 1920s, there were too few roads, which in turn made the railroads indispensable to mobilise and then manoeuvre any kind of an armed force. However, De La Huerta's forces did not control the railroads, and lacked modern means of communication: the result was massive problems in the coordination of their manoeuvres.

- Logistics: although controlling most of ports in the Gulf of Mexico, and much of the Mexican Navy's fleet, the rebels failed to interrupt the links between the Federals and the USA in the north, and thus failed to prevent Obregón's government from obtaining large numbers of aircraft, armaments, and supplies.

Early Days on the Eastern Front

On 7 December 1923, *General* Enrique Estrada, Commander of the 2nd Northeast Division, secured the city of Guadalajara, in Jalisco, together with the *Escuadrilla* (Flight) of Farman F.50Bn2s, commanded by Captain Ascensión Santana. It is worth emphasising this move, for this garrison had the largest number of troops and best stocks of supplies available to the rebels, and thus offered the best opportunity for an advance on Mexico City.

On the same day, the part of the air force that remained loyal to the government ordered one of its squadrons to Iguala, in Guerrero, on the southern front, where it was to fight the rebel Romulo Figueroa. However, in the light of the sudden loss of Guadalajara, the unit was redirected to Irapuato, in Guanajuato, shortly after. Once there, it established a 'campaign airfield' (essentially a forward operating base, FOB), and began providing its services to the western front. Originally including four officers – *Capitán* Alberto H. Vieytez y Vieytez, *Teniente* Pablo L Sidar, *Teniente* Ricardo J Jiménez, and *Teniente* Adán Gálvez Pérez – this flight included only two aircraft: an Ansaldo SVA A.5, and a Morane-Saulnier MS.35 Parasol. On 8 December 1923, these were reinforced through the addition of several TNCA Serie B Salmson aircraft form the Light Bombing and Observation Squadron. At this time, the officers still did not know about the loss of the Farman F.50Bn2s at Guadalajara. A good example of how the operations of the diminutive asset developed subsequently can be found in the pilot logbook of *Mayor* Gustavo G León González, as shown in Table 2.

On 10 December, the Light Bombing and Observation Squadron at Irapuato was reinforced through a third flight consisting of five aircraft, among them were two MS.35s (10-A-102 and 31-A-123), an Ansaldo A.5, and a Brown Special Biplane ('*Nanette*'). Moreover, it received seven additional pilots and one mechanic, including *Capitán* Rafael Ponce de León, *Teniente*s Agustín G. Castrejon, Alfredo Lezama, Alfonso Cruz Rivera, Alfonso I Pina, Manuel Zayas, and Luis Caso Landa, and *SubTeniente* Arnulfo Cortez (mechanic). On 13 December 1923, another flight reached Irapuato, this time including two F.50Bn2s, pilots *Capitán* Rafael Montero and *Teniente*s Jorge Fabris, and crewmembers *Teniente* José G Jasso, Antonio Duran, David Borja, and Adán Gálvez Pérez.[1]

Table 2: Excerpts from *Mayor* Gustavo G León González's Pilot Logbook for mid-December 1923

West Front (Irapuato Campaign Airfield)

Date	Airplane	Mission	Time
08 December	TNCA "B"	Reconnaissance flight, with 2 Sorties Ocotlán, Jalisco	02:40
09 December	Id.	Reconnaissance flight, Yurecuaro, Michoacán	03:45
10 December	TNCA "B"	Reconnaissance flight, La Piedad, Michoacán	02:30
12 December	Id.	Reconnaissance flight, Penjamo, Michoacán	03:00

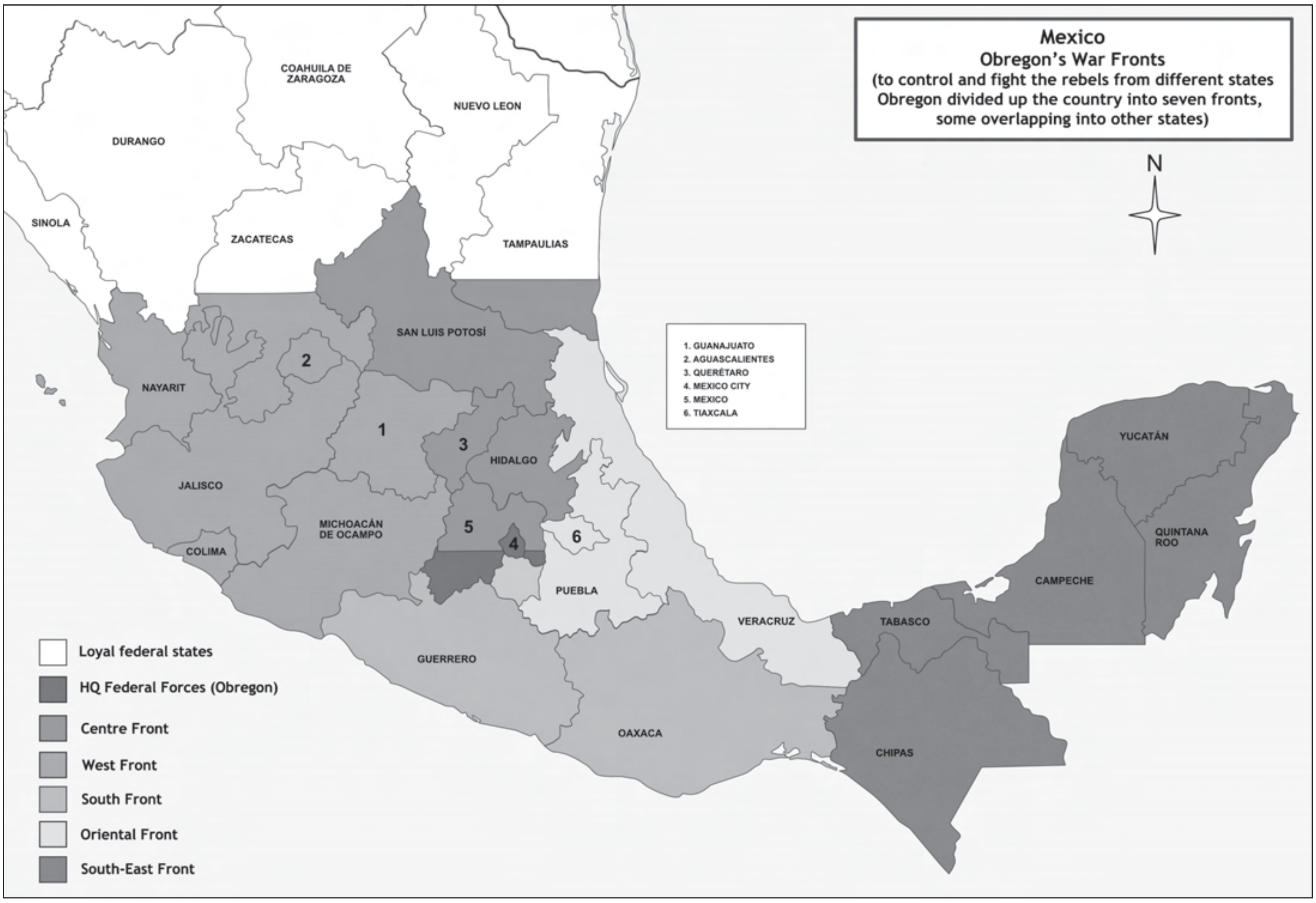
Table 3: Known Sorties of the Military Aviation Service, mid-December 1923

East Front (Apizaco FOB)

Date	Airplane	Mission	Time
12 December	Farman F.50	Bombing Esperanza train station	No data
16 December	Farman F.50	Reconnaissance flight, over train stations Oriente, Esperanza, Perote and San Marcos (Puebla)	No data
17 December			
17 December	Farman F.50	Bombing Esperanza train station (failed mission)	No data
West Front (Irapuato FOB)			
Date	**Airplane**	**Mission**	**Time**
13 December	TNCA "B"	Flight over Los Altos, Jalisco.	04:20
	MS.35C	Flight over Ocotlán, Jalisco	No data
16 December	TNCA "B"	Flight over Atotonilco, Jalisco.	03:25
17 December	Farman F.50	Reconnaissance flight, La Piedad, Michoacán. (On this flight, the bomber suffered engine stoppage, making a forced landing)	No data
	L.S.	Flight over Zapotlanejo, Jalisco	03:20
18 December	L.S.	Reconnaissance flight, over Morelia and Celaya; Michoacán	04:20
19 December	Id.	Reconnaissance flight, Los Altos, Jalisco	02:20

Meanwhile, a total of two Farman bombers, two MS.35Cs, a Brown Special, and the Lincoln Standard L.S. of the Military Aviation Service were all deployed to the Apizaco FOB, in Tlaxcala, to support the Eastern Front, where, on 14–15 December, the Loyalists lost the city of Puebla. Table 3 lists known missions of this unit through mid-December 1923. On 17 December, one of the Farmans was deployed to bomb Esperanza train station in Puebla, but this air raid was not effective: out of five bombs released, only one detonated, causing superficial damage only. However, the pro-De la Huerta press was incorrect in its claim that the crew subsequently refused to fight and defected: actually, the Federals advanced on Puebla that day, encircling this important city on both flanks.

On 18 December, the Federal government in Mexico City placed a major order for additional aircraft in the USA. This stipulated deliveries of nine de Havilland DH.4Bs, six Lincoln Standards, and one aircraft named '*Balilla*', together with 340 bombs and


Mexico
Obregon's War Fronts
(to control and fight the rebels from different states Obregon divided up the country into seven fronts, some overlapping into other states)
N
COAHUILA DE ZARAGOZA
NUEVO LEON
DURANGO
SINOLA
ZACATECAS
TAMPAULIAS
SAN LUIS POTOSÍ
NAYARIT
2
1
3
HIDALGO
JALISCO
MICHOACÁN DE OCAMPO
5
4
6
COLIMA
PUEBLA
VERACRUZ
GUERRERO
OAXACA
TABASCO
CHIPAS
CAMPECHE
YUCATÁN
QUINTANA ROO
1. GUANAJUATO
2. AGUASCALIENTES
3. QUERÉTARO
4. MEXICO CITY
5. MEXICO
6. TIAXCALA
Loyal federal states
HQ Federal Forces (Obregon)
Centre Front
West Front
South Front
Oriental Front
South-East Front

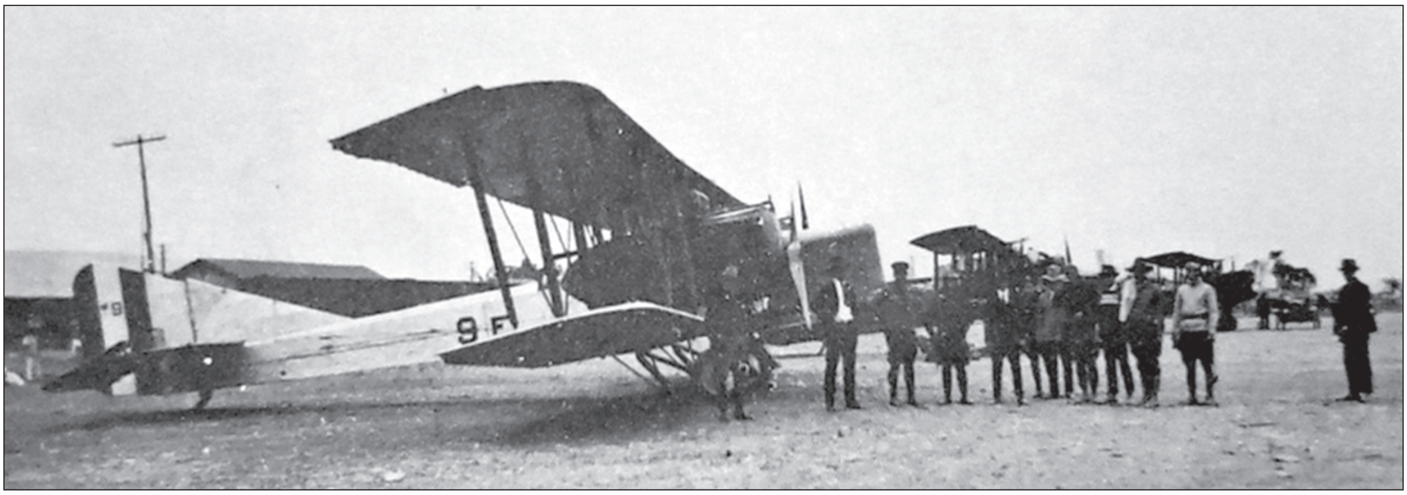
The De la Huerta Rebellion resulted in fighting almost everywhere in Mexico. Notably, Obregón divided his forces on two fronts, with some overlaps. This map shows the Federal states affected by the rebellion as of December 1923. (Map by Mark Thompson)

40,000 cartridges for machine guns, from a private company. Such an acquisition was urgently necessary as on the same day the rebels launched a major advance on the western front, capturing numerous towns in the Lagos region, most important of which was San Juan de los Lagos, in the state of Jalisco. By 21 December, the rebel-supporting press published a request by *General* Estrada, urging the Federals in Guadalajara to lay down their weapons. However, as described above, the actual rebel advance was very limited: on the contrary, they were weary of engaging in bigger battles, of urban combat, and lacked means of effective air defence.

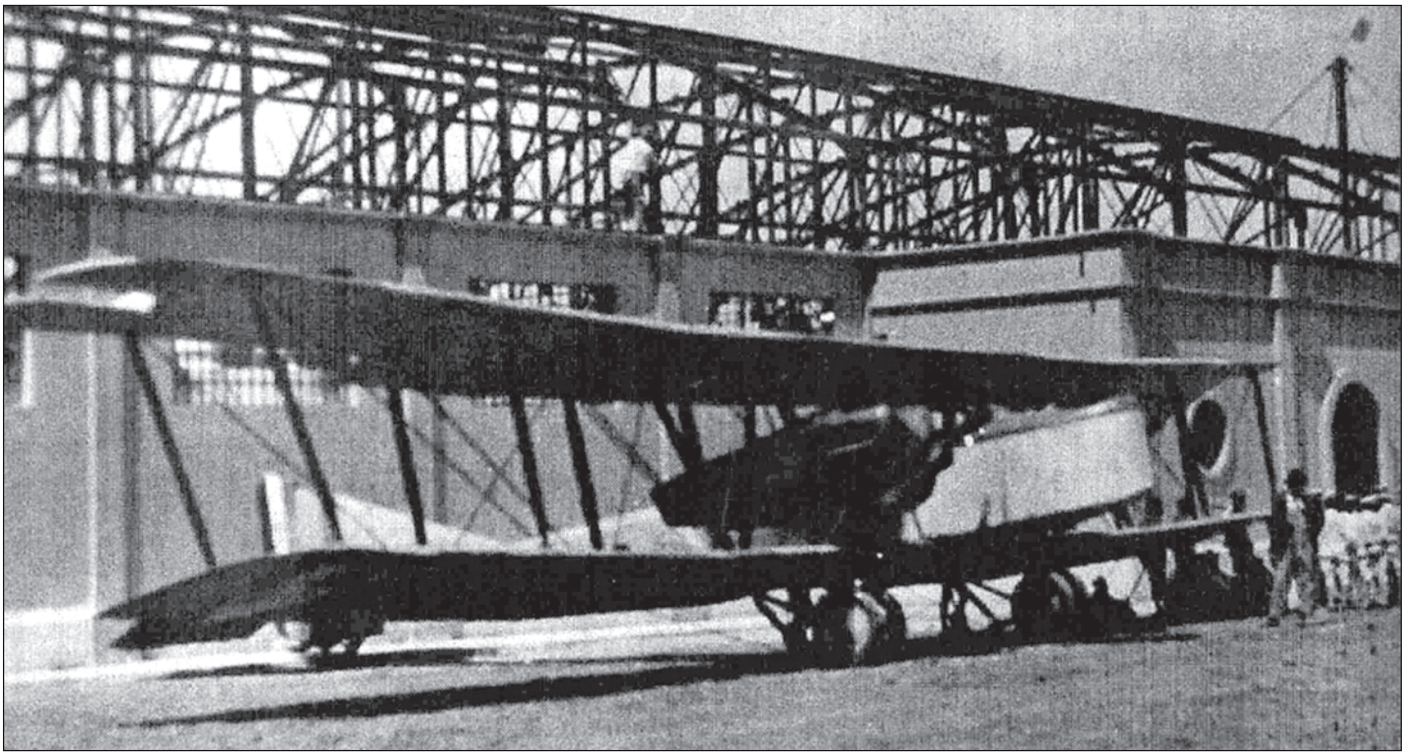
Indeed, on 22 December, the Army completed its enveloping manoeuvre of Puebla, securing the airfield west of the city. This operation was supported by the TNCA registered as 3-E-131 (powered by a BMW engine and named *Quetzalcoatl II*), a Junkers-Larsen JL-6, and a TNCA Series B (named *Puros*), piloted by *Mayor* Samuel C Rojas, and *Teniente*s Pablo L Sidar, Guillermo Monroy, Luis Farrell and Pablo Ledon. They first bombed the forts of Loreto, San Juan, and Guadalupe with a total of 74 bombs, scoring numerous hits. These attacks proved highly effective as shrapnel from bombs that detonated inside the fortifications tended to ricochet from the thick walls, significantly increasing their effectiveness, and demoralising the defenders. Unsurprisingly, the rebels preferred to retreat after this experience.

One of the rebel leaders in command of a major force – and a commander to be reckoned with – was *General de Division* Enrique Estrada Roque, who secured Guadalajara and a flight of Farman bombers forward-deployed there. (SEDENA)

On the western front, on 22 December, the 2nd Northwest Division attacked from Guadalajara in the direction of Mexico City. However, due to the rebel failure to control the railroad, and timely positioning of Federal defences at Penjamo and La Piedad – protecting the logistics base and airfield in Irapuato – the assailants abandoned their intentions and turned north instead. They occupied Los Altos de Jalisco before attempting to surprise the Federals in the barracks and Irapuato, but without success. Simultaneously, another rebel advance on Mexico City was launched from the south. It began with the capture of Cuernavaca (capital of the state of Morelos), and Pachuca (in the state of Hidalgo). Moreover, they attacked from Veracruz in the direction of Puebla, trying to distract Obregón's effort to concentrate his forces against the 2nd Northwest Division. Obregón reacted by ordering O'Neill to raid Puebla from the air. In his memoirs, the latter stressed it was *General* Gustavo Salinas – Chief of the Military Aviation Service – who ordered him to fly this mission. Piloting TNCA 4-E-131, O'Neill

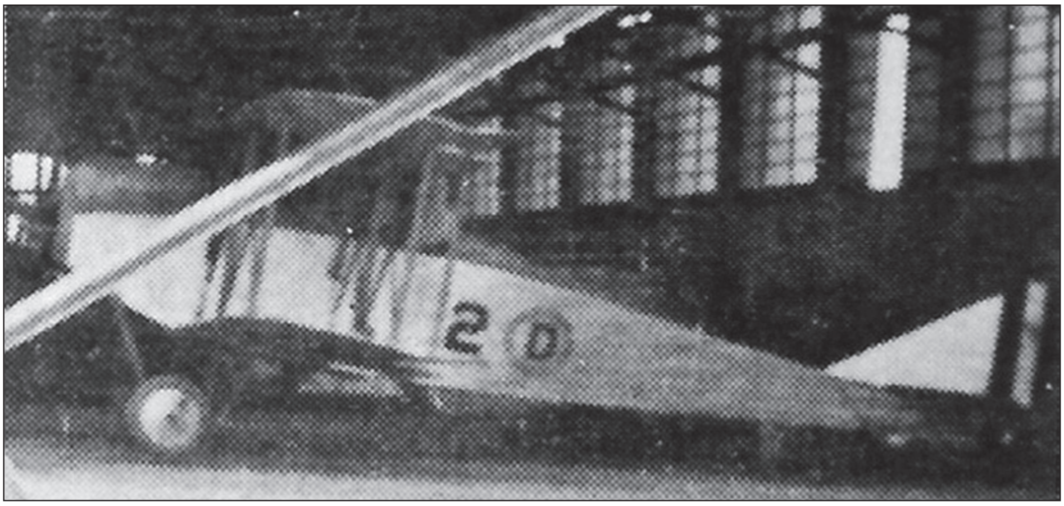


Among the aircraft that served on both sides were Farman F.50Bn2 bombers: some five of these fell into rebel hands at Guadalajara. (Ing. Enrique Velasco Collection)

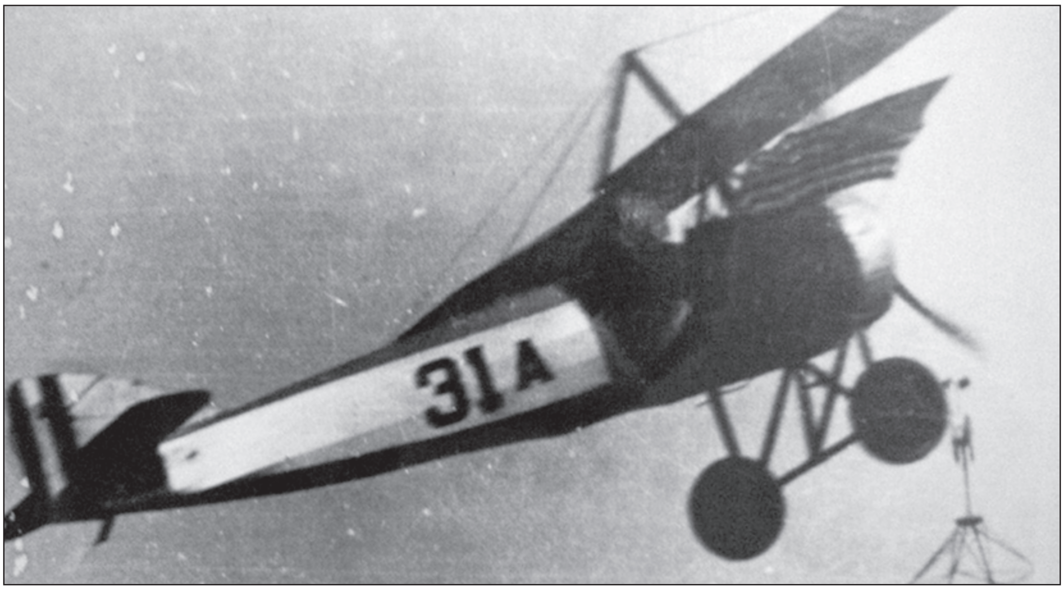


One of the F.50Bn2s seen here at Guadalajara prior to December 1923, following their epic flight from Mexico City. (Ing. Enrique Velasco Collection)

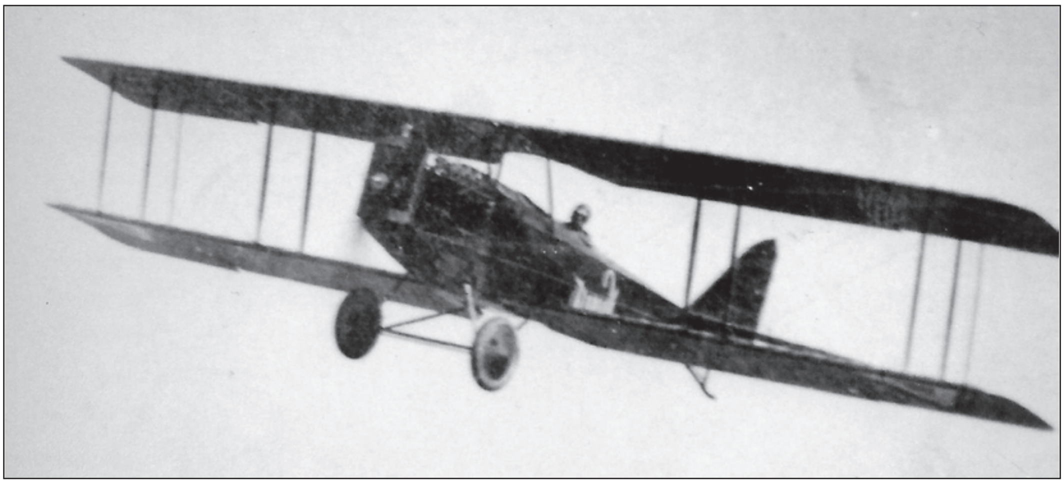
flew the mission accompanied by observer/bombardier Pablo Sidar but failed to complete it: after hearing 'strange sounds' from the wing, he landed back in Balbuena and recommended to Salinas that the aircraft never be flown again. As if to confirm his suspicion, on the next day – 23 December 1923 – the TNCA 4-E-141 crashed during an air raid on rebel positions at Ixtal Bridge, in Cuernavaca, killing the crew consisting of *Capitán* Julián Nava Salinas and *Teniente* Guillermo Monroy. Because US instructor Joe B Lievre had flown the same aircraft earlier



One of the first aircraft deployed against the De la Huerta Rebellion was the sole Ansaldo A.5 two-seater biplane, which was written off during the action. (Ing. Enrique Velasco Collection) that day and reported no problems, it was assumed that one of its bombs that had not been dropped detonated during the flight back to base. Of course, the rebel press reacted by spreading reports about 'sabotage'.



Another aircraft deployed with the first Federal unit against De la Huerta was the Morane-Saulnier MS.35. Amongst those confirmed to have seen action was 31-A-123, here in a later photograph during Lindbergh's arrival in Mexico in 1927. (Ing. Enrique Velasco Collection)

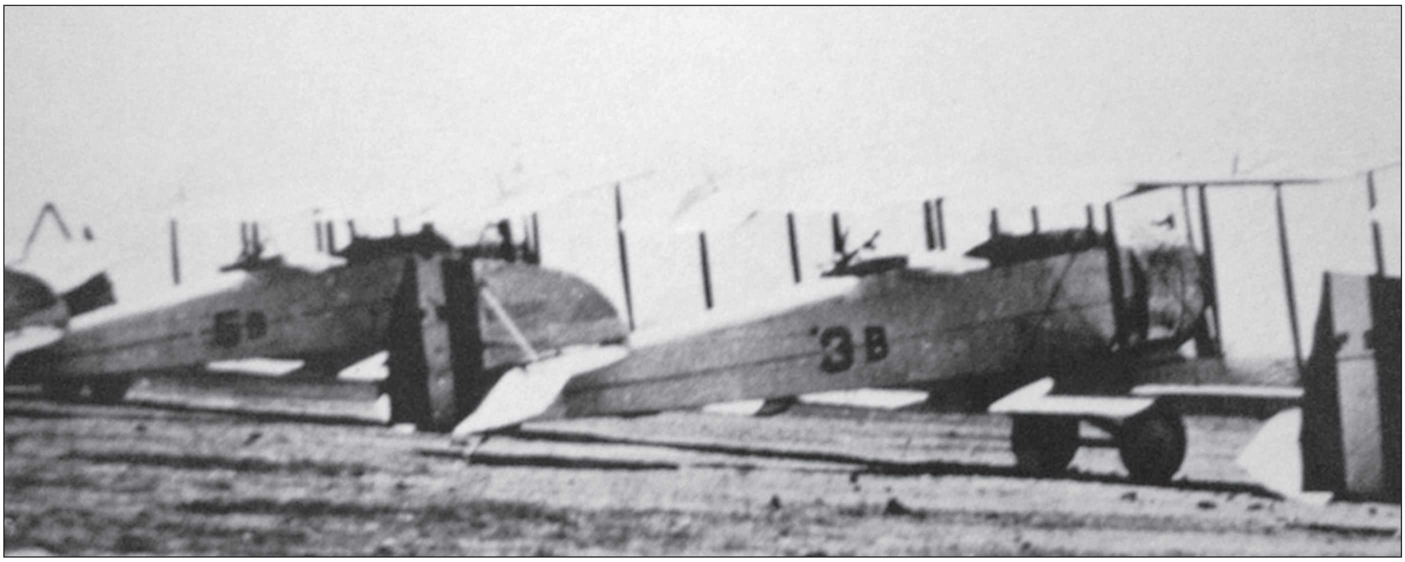


Reportedly, Samuel C. Rojas' Brown Special (named *Nanette*) was also returned to service and deployed for reconnaissance purposes. (Ing. Enrique Velasco Collection)

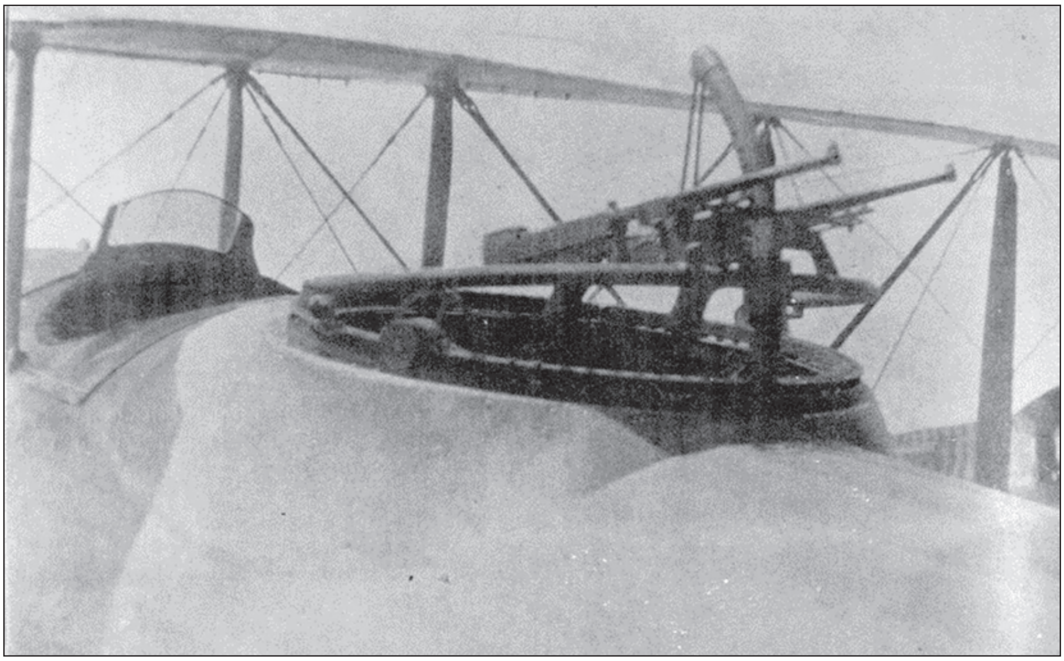
The defeat of Cárdenas

While one might expect the resulting rumours to demoralise the fliers of the Military Aviation Service, they kept on flying and fighting. Indeed, during the night to 23 December 1923, *Teniente*s Alfredo Lezama and David Borja undertook the first night bombing in the history of the service and hit the rebel positions at Ocotlán. The mission was possible because the two knew the area from their earlier reconnaissance flights. Thus, they returned to the base, loaded bombs and flares, and then deployed the former with the help of the latter. In recognition of this achievement, both pilots were congratulated by the High Command and received an honourable mention in dispatches.

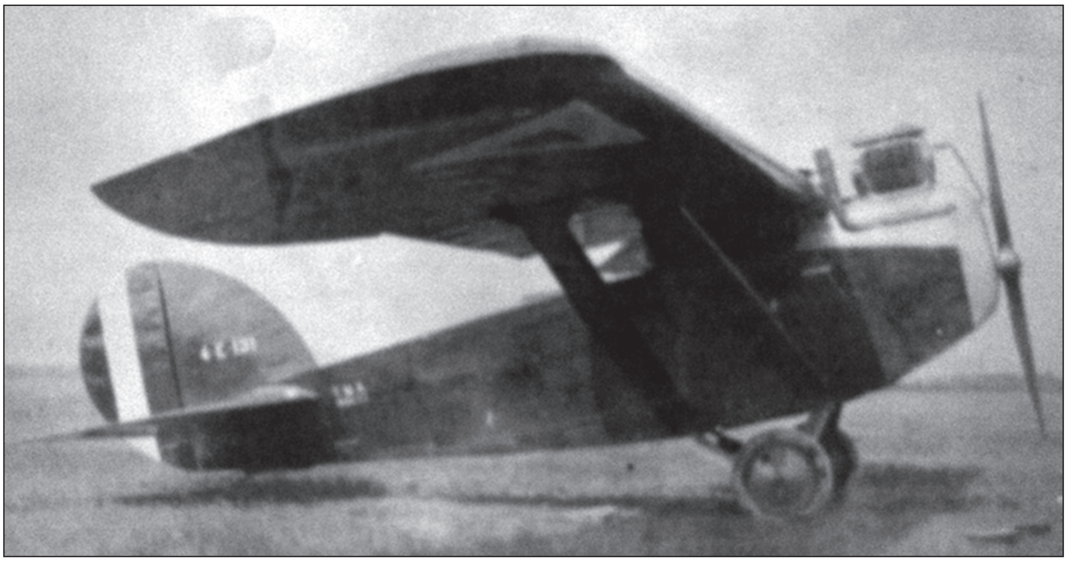
To further improve the morale of the Federals, *General* Lázaro Cárdenas del Rio then received the order to advance unobserved through southern Jalisco, circle Lake Chapala, and hit the rebels in the back, further disrupting their coordination and forcing them to withdraw from the Ocotlán area and the Port of Manzanillo. However, Cárdenas had his



Also deployed were the locally-manufactured TNCA Serie B Salmson Puro biplanes, two of which are shown here after being redeployed from different parts of the country. (Ing. Enrique Velasco Collection) own ideas, and thus he led his force of about 2,500 into an attack on Guadalajara instead. Certainly enough, the rebel spies soon reported his movement, and Cárdenas was ambushed by *General* Rafael Buelna at Huejotitlán, losing about 200 killed, 300 wounded, and 1,500 captured, with only some 500 survivors managing to escape. When Obregón learned of the defeat of Cárdenas, he reportedly exclaimed, 'I ordered him not to press for combat. Deliver us God from a *tarugo* [stupid] with initiative'. Cárdenas' defeat had severe repercussions – foremost for the Federals. Amongst other things, it caused rumours that whoever deserted from the Federal side would be pardoned by De la Huerta, while whoever lost a battle or deserted would be executed by Obregón or Calles.



At the start of the De la Huerta Rebellion, very few MAS aircraft were actually armed. Amongst those that were armed were the TNCA Serie B Salmson Puros that had two Thompson machine guns in the observer's position. (Ing. Enrique Velasco Collection)



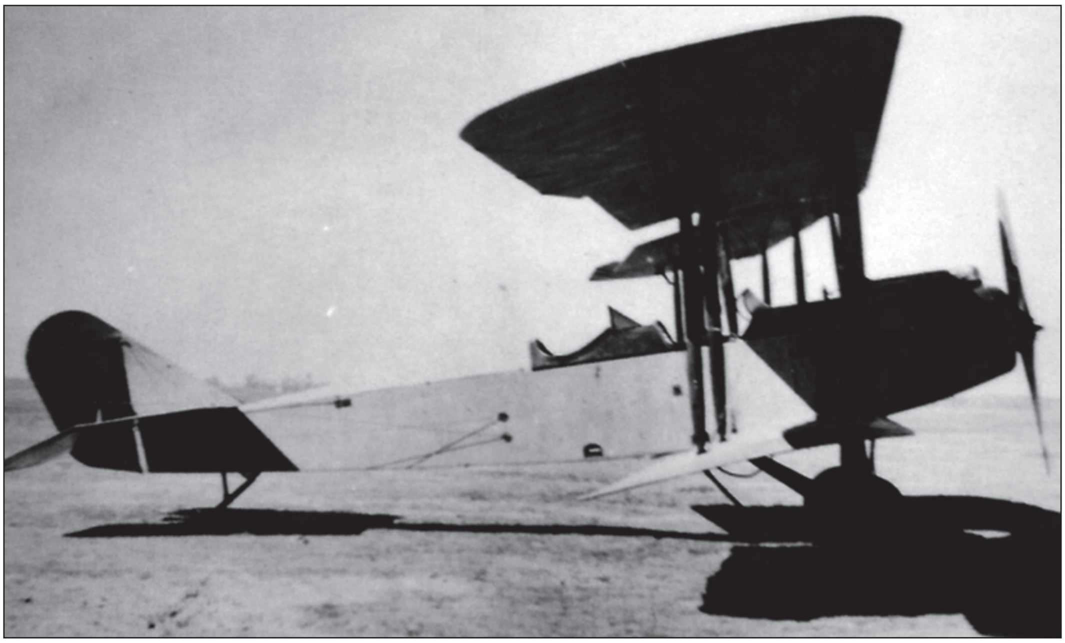
The tragic loss of the sole TNCA 4-E-131 *Quetzalcoatl* ignited a fierce dispute between O'Neill and Salinas, about usefulness of Mexican-made aircraft. (Ing. Enrique Velasco Collection)

Crisis

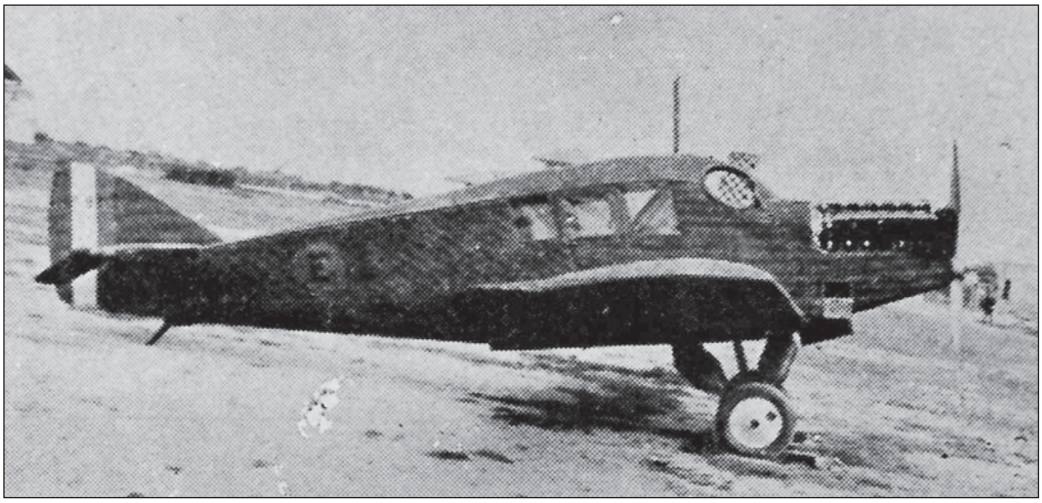
Cárdenas' defeat and the crashes of their worn-out aircraft were still not the last tragedy that befell the Military Aviation Service at that time. On 30 December 1923, a TNCA Series B Salmson biplane was hit in the fuel tank by ground fire while underway over Ocotlán (now a rebel stronghold). The crew managed to land safely and escaped, but the aircraft was subsequently destroyed by a squad of rebels. The reason for this loss was the lack of adequate armament, which forced the crew to descend to an altitude from which its pair of .45 calibre Thompson machine guns would be effective. Not only this incident, but the failure to fly effective operations clearly pointed out the lack of capabilities and firepower of the Military Aviation Service. The year of 1923 thus ended with the nascent service strained beyond the limit of its operational capabilities and in urgent need of new aircraft – just like the entire Federal Army was in urgent need of a major success on the battlefield.

Help was already underway, though, as on 28 December 1923, the first of the new DH.4Bs arrived at Irapuato, together with crates containing machine guns and thousands of rounds of ammunition – and about 800 Mayan Indians that entered Mexico from the USA with authorisation of the Federal government. In early January 1924, the Military Aviation Service's magazine *Tohtli* reported that 'eight de Havilland 4-Bs equipped with 400 horse-power strong Liberty engines and five Lincoln Standard L.S.s powered by 150 horse-power strong engines were now in service', and 'achieving excellent results.' *General* Fierro observed in his book, later on: 'It was during the campaign, one day we received a fleet of de Havilland DH.4 combat aircraft. They were new and proved their worth in the glory of the First World War. Alone their sheer size caused great expectations, for every one was as big as a locomotive!'

In a rush to get the new aircraft into action, Obregón ordered the US pilot George Gish to provide a crash course to the Mexican fliers. The resulting training was thus undertaken under circumstances that would, nowadays, certainly be considered as strange, if not comic. For example, *Teniente* Alfredo Lezama flew so low during one of his training sorties, that he collided with a donkey: while the poor animal was killed, the pilot survived, but the brand-new DH.4 was a total loss. Another de Havilland was then crashed by Fierro, who overshot the runway on landing and hit a wall protecting the presidential train. On hearing the sounds of the crash, Obregón got out of his car and onto the platform to take a look at the disaster and exclaimed: '*Es por demas! No tiene remedio; la miel no se hizo para*



It appears that this Lincoln Standard J-1 was pressed into service during the De la Huerta Rebellion and was deployed for reconnaissance operations. (Ing. Enrique Velasco Collection)



This photograph shows one of two Junkers-Larsen JL-6s that were deployed as bombers and for reconnaissance purposes. Both aircraft would be lost during the De la Huerta Rebellion: one was flown to the rebel side by a defecting crew, while the other was landed in rebel territory and then destroyed by its crew. (Ing. Enrique Velasco Collection)

la boca del asno!' This can be loosely translated to mean 'This is too much! Honey was not made for the mouth of a donkey!'[2]

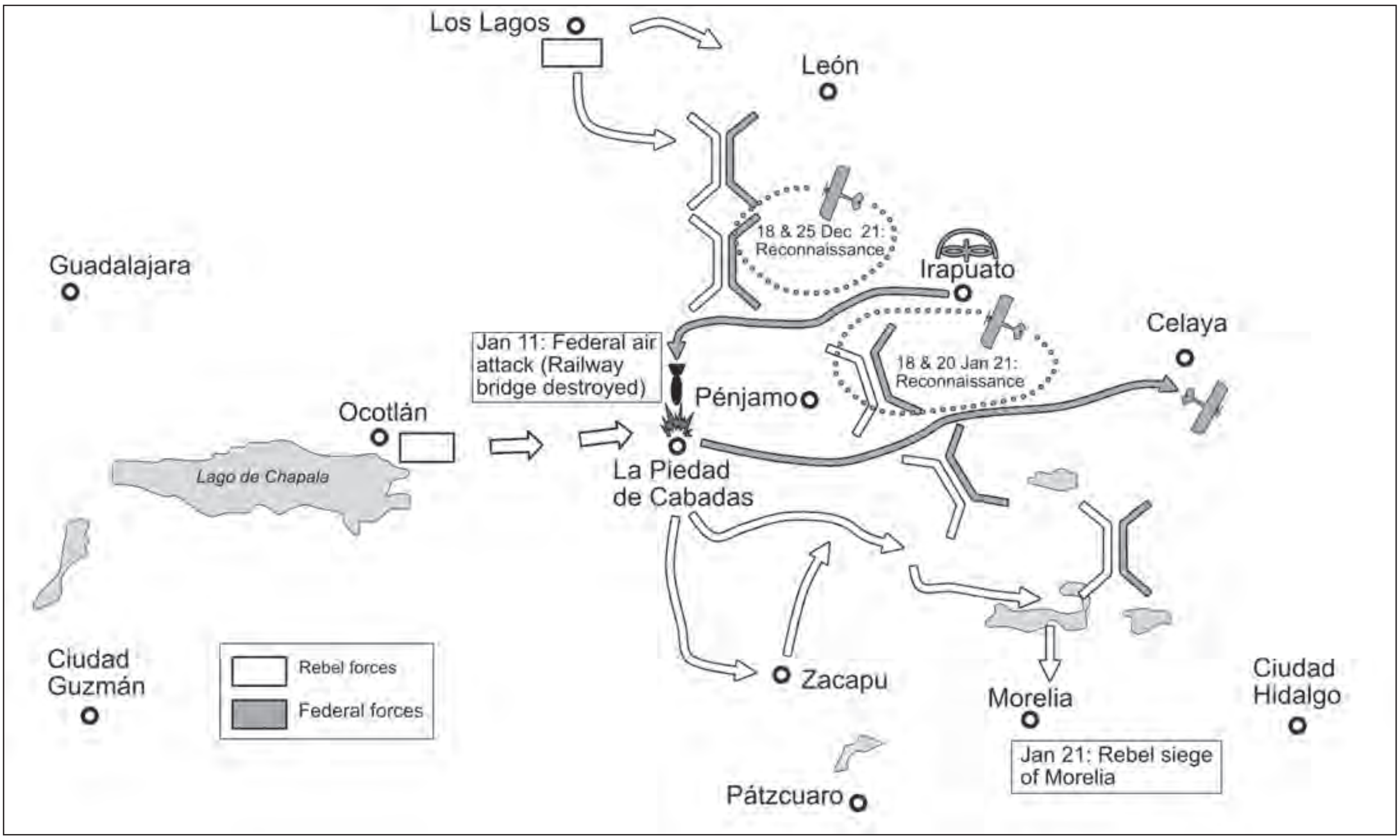
While Gish appears to have been the only American involved in getting DH.4s operational with the Military Aviation Service, the rebel propaganda – for example the newspaper *El Informador* of Guadalajara, on 1 January 1924 – exploited his presence to declare Obregón a 'traitor' who had 'hired US airmen and sailors'.

Western Front in early 1924

The quick loss of two brand-new aircraft was an unfortunate mistake caused by the necessity of Mexican crews to learn their trade on modern and powerful aircraft. Nevertheless, there was no doubt that the Military Aviation Service was now on the way to major improvements. Over the following days, de Havillands were deployed to fly north and south of Irapuato, helping the Army to avoid a pincer manoeuvre by the rebel cavalry (supported by numerous mounted volunteers with excellent knowledge of the local terrain). However, for the time being, they could do little to prevent the first serious rebel offensive launched on 4 January 1924 by the command of Guadalajara on the western front, this was supported by the Farmans that had been captured in the previous month, whose crews were forced to fly an air raid against the armed transport ship *Progresso* anchored off the Port of Manzanillo. Captain Ascensión Santana led the flight of three bombers from Las Juntas airfield outside Guadalajara. This action proved highly effective even if Santana's four bombs missed their target (whether because the pilot intentionally missed, or because his aircraft was equipped with the German-made Goertz bomb sight, to which the pilot was not accustomed): while they raised only harmless water columns on detonation, the crew of the ship was discouraged to a degree where it raised the white flag of surrender.

Two days later, the 2nd Division of the rebels had established its headquarters at La Piedad Michoacán, and established positions to face the Federals at Irapuato and Guanajuato, while their seven cavalry regiments were deployed to outmanoeuvre the enemy from the north (along the route Altos de Jalisco – Leon – Irapuato) and from the south, along the route Morelia – Irapuato, and to secure the local branch of the railroad. However, by this time, an arms embargo imposed by the United States on 23 December 1923, hit the rebels very hard. Through January 1924, this caused a crisis, as the shortage of ammunition and supplies forced Estrada to stop this campaign. Instead, Estrada hoped to coordinate his advance on Mexico City with that of Guadalupe Sánchez from Veracruz, and Puebla and Romulo Figueroa from Guerrero.

That this plot might have worked became obvious on 11 January 1924 when, fearing a rapid rebel advance in the form of a pincer attack on Irapuato, Obregón ordered the DH.4Bs to attack the railroad bridge at La Piedad Michoacán, and then divert to Balbuena Airfield 'to avoid capture'. According to the memoirs of Roberto Fierro, the flight of five de Havillands was crewed by *Coronel* O'Neill, instructor George Gish, *Capitán* Gustavo G. León González, and *Tenientes* Pablo Sidar, Roberto Fierro Villalobos and Juan A Gutiérrez. However, it seems that the mission was undertaken in such urgency, that only two DH.4Bs – those flown by Gish and Gustavo León – completed it and then reached Balbuena. On the contrary, O'Neil made a forced landing between Toluca and El Oro (in Mexico State), Sidar crashed his aircraft between Tlalnepantla

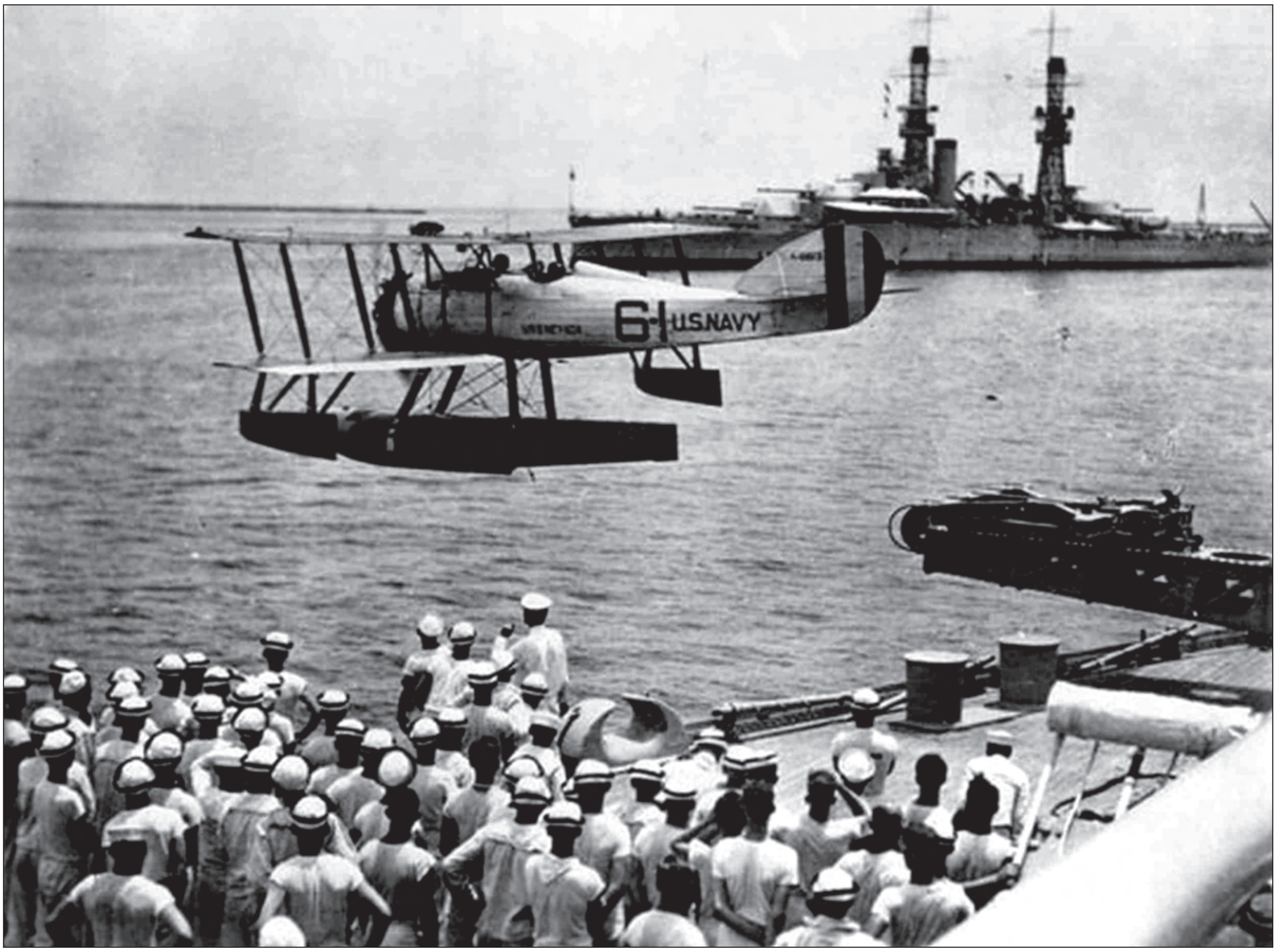

Los Lagos
León
18 & 25 Dec 21: Reconnaissance
Guadalajara
Irapuato
Celaya
Jan 11: Federal air attack (Railway bridge destroyed)
Pénjamo
18 & 20 Jan 21: Reconnaissance
Ocotlán
Lago de Chapala
La Piedad de Cabadas
Ciudad Guzmán
Rebel forces
Federal forces
Zacapu
Morelia
Ciudad Hidalgo
Jan 21: Rebel siege of Morelia
Pátzcuaro

Aerial operations conducted by the MAS during December 1923 and January 1924. (Map by Manuel Reyna Garza and Mark Thompson)

Table 4: Known Sorties of the Military Aviation Service, early January 1924

West Front (Irapuato Campaign Airfield)

Date	Airplane	Mission	Time
01 January	L.S.	Reconnaissance flight, Yurecuaro, Michoacán	03:05
02 January	L.S.	Reconnaissance flight, Ixtalahuacan, Jalisco	02:20
	L.S.	Reconnaissance flight, Yuriria, Guanajuato	03:45
03 January	L.S.	Reconnaissance flight, Teneria	03:50
04 January	L.S.	Reconnaissance flight, Concepción	03:20
	Farman F.50	Transfer flight, 3 rebel planes from Guadalajara to the Port of Manzanillo	No data
08 January	L.S.	Reconnaissance flight, Luisito el Fuerte, Michoacán	04:10
	L.S.	Reconnaissance flight, Yuriria, Guanajuato	03:10
09 January	L.S.	Reconnaissance flight, Celaya-La Venta, Guanajuato, Guanajuato	04:20
10 January	L.S.	Reconnaissance flight, Las Animas, Guanajuato	03:30
11 January	L.S.	Reconnaissance flight, Jaripitiro, Michoacán	04:05
	DH.4B	Five aircraft bombing the railroad bridge in La Piedad, and fly to Mexico City	05:00
14 January	L.S.	Reconnaissance flight, Yurecuaro-Ajuno, Michoacán	04:00
15 January	L.S.	Reconnaissance flight, Sauceda-Gregorio, Michoacán	04:30
	L.S.	Reconnaissance flight, Burras-Molino, Michoacán	03:40
16 January	L.S.	Reconnaissance flight, Cañada-Ortega, Guanajuato	04:00
17 January	L.S.	Reconnaissance flight, La Erre, Guanajuato	04:00
18 January	L.S.	Reconnaissance flight, Pantoja-Peralta, Guanajuato	04:00
19 January	L.S.	Reconnaissance flight, El Refugio, Michoacán	04:00
20 January	L.S.	Reconnaissance flight, Abasolo, Guanajuato	03:50
21 January	L.S.	Reconnaissance flight, Tierra Blanca, Guanajuato	03:30



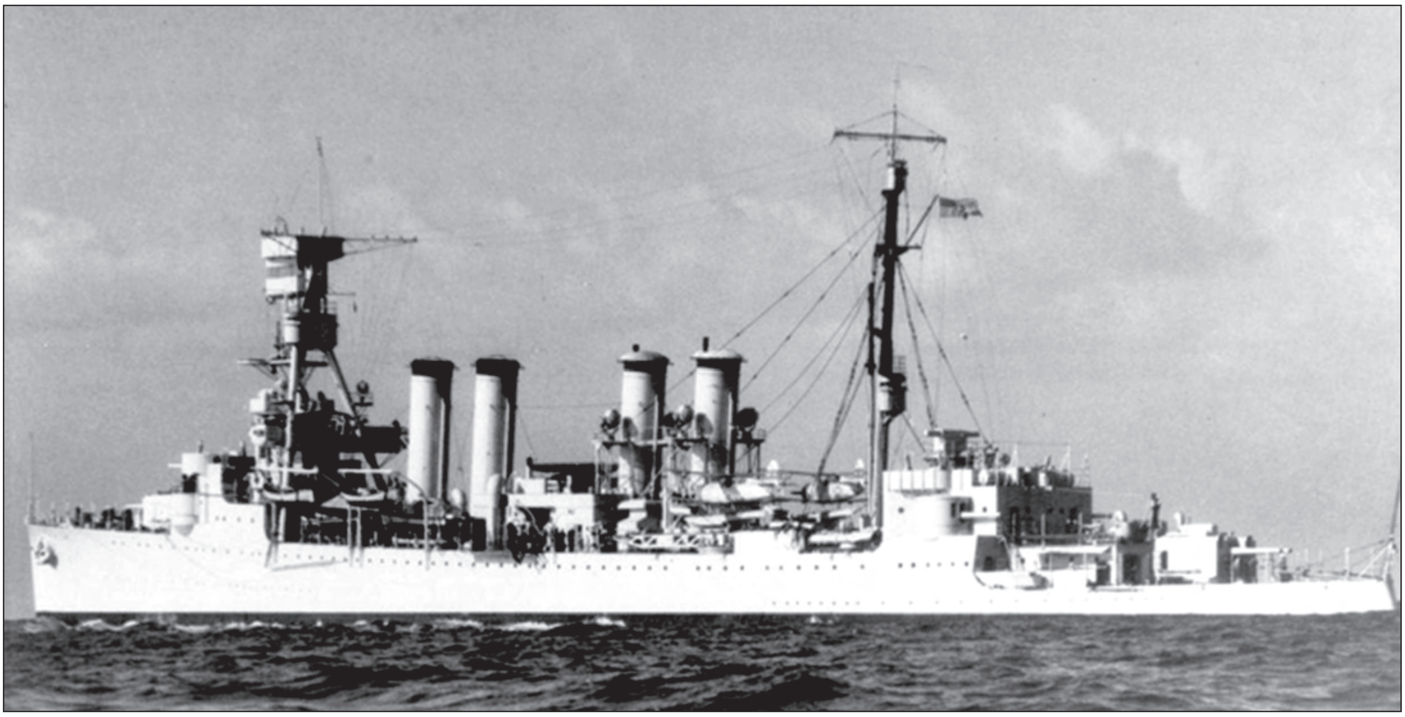
To help Obregón, the USA deployed a number of warships of the US Navy, thus making sure Mexican ports remained open for commerce – but also to protect US interests. Several of the warships were equipped to carry Vought UO-1 floatplanes, one of which is seen here, milliseconds after being launched from a catapult. (US Navy)

and Azcapotzalco, while Fierro made an emergency landing at a minor airfield outside El Oro, where his aircraft suffered damage to a wheel and the radiator. It was only after the crew walked to the town to get a new wheel, and following repairs of the radiator, that this aircraft was flown to Balbuena a day later.

With what was left of the DH.4B force in the safety of Balbuena – and then reinforced by the arrival of several new de Havillands (see Table 5 for their new organisation) – on 12 January 1924, Obregón assigned O'Neill to the headquarters of the Eastern Front at Irapuato Michoacán. The Eastern Front was commanded by *General Brigadier* Gustavo Salinas, one of Mexican aviation's pioneers but who had no experience in leading aviation units into combat and no knowledge whatsoever about tactics. On the contrary, O'Neil was a veteran of the Great War. Unsurprisingly, this caused ill feelings between the two, and Salinas even accused O'Neil of being a 'US spy', and 'trying to sabotage the Federal Army.' Eventually, it took Obregón's intervention to sort out the relations between the two.

Meanwhile, Estrada began planning an offensive from the west against Mexico City at the first opportunity. The crucial predisposition for such an operation was not to leave any notable Federal force intact – whether behind or on the flanks of his axis of advance – and to secure the town of Morelia. Precisely this was what Obregón saw as his opportunity: not only that any advance on Mexico City would force the rebels to attack well-entrenched Federal troops, but to secure the flanks Estrada's cavalry had to dismount and fight as infantry, or – inside Morelia – engage in urban combat, where it was exposed to loyalist infantry, sappers, artillery, and the air force. An advance on the capital was also distancing them from their main logistics base in Guadalajara.

Table 5: DH.4B Escuadrillas (Flights) of the Military Aviation Service, January 1924
Escuadrilla Capitán Rafael Ponce de León
Teniente Agustín González Castrejón *Teniente* Alfredo Lezama Álvarez *Teniente* David J. Borja *Teniente* Alfonso Cruz Rivera *Teniente* Manuel Zayas Palafox *Teniente* Luis Caso Landa
Escuadrilla Coronel Ralph O´Neill *Teniente* Pablo L. Sidar *Teniente* Adán Gálvez Pérez *Teniente* Gustavo G León *Teniente* Francisco Carrillo *Teniente* Roberto Fierro Villalobos
Teniente Ricardo M. Jiménez *Teniente* Ignacio Ortiz *Teniente* Salvador Noble Virgen



One of the US Navy warships deployed to Mexico in 1923 was the cruiser USS *Richmond*. This was also equipped to carry UO-1 floatplanes, which helped its crew keep an eye on the situation in the Mexican ports. (US Navy)

Eventually, Estrada opened his offensive by advancing on Morelia in the south, but also striking to the north in an attempt to surprise the Federal rear-guard. However, this proved too much: his force found itself overextended and short of supplies. What happened next was both theatrical and ironic: from his headquarters in Celaya, Obregón contacted Estrada in his forward headquarters in Salvatierra via telegraph and challenged him to take Morelia. The rebel general dully reacted as expected and on 21 January 1923 assaulted this town, provoking a pitched, street-by-street, house-by-house battle. The loyalist garrison was overpowered the following day, but this proved a pyric victory that cost the rebels many men and mounts, and most of their ammunition. For all practical purposes, their advance on Mexico City from the west was over, and Obregón was given an opportunity to counterattack.

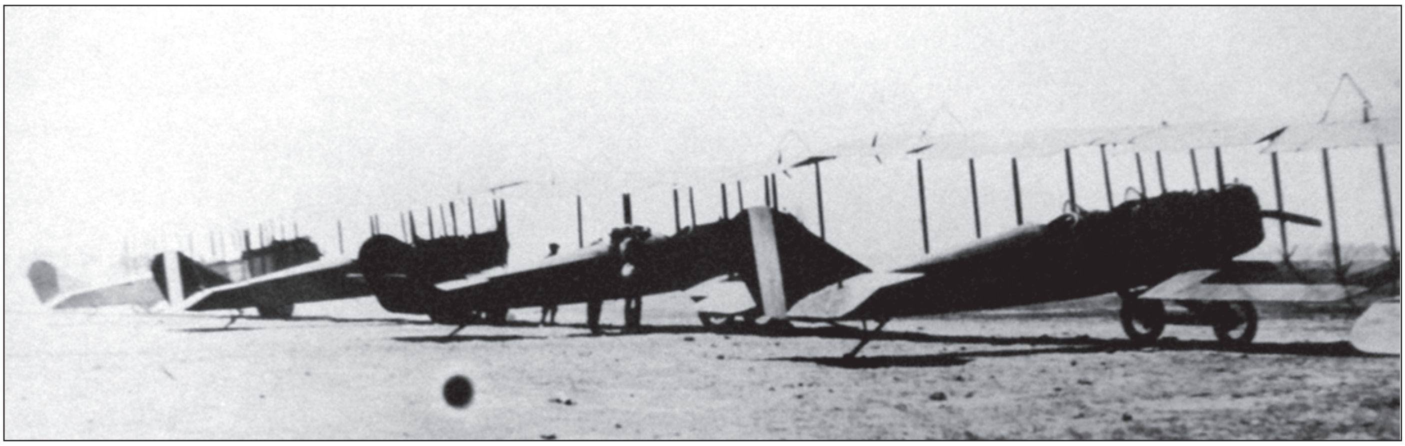
The Change of Tide

Obregón was working fast and, in preparation for the coming offensive, on 22 January 1924 he appointed O'Neill in charge of the Military Aviation Service, stressing he would depend on his tactical skills during the coming operation. Indeed, the flying service went into action the same day, when a flight of DH.4Bs led by *Capitán* Roberto Fierro attacked a large concentration of rebels – and *soldaderas* (women who followed the combatants all over the battlefield) – in the bullring at Morelia. The surprise of the sudden attack was only surpassed by its violence and the volume of firepower of the aircraft, never experienced in Mexico before. While rebel losses were relatively light, this attack delivered a massive psychological blow, and effectively collapsed their morale – even more so because shortly afterwards other DH.4Bs attacked several other points around the town in similar fashion. To 'dot the I', after the air raids, another aircraft

Table 6: Known Sorties of the Military Aviation Service, late January 1924

Western Front (Irapuato Campaign Airfield)

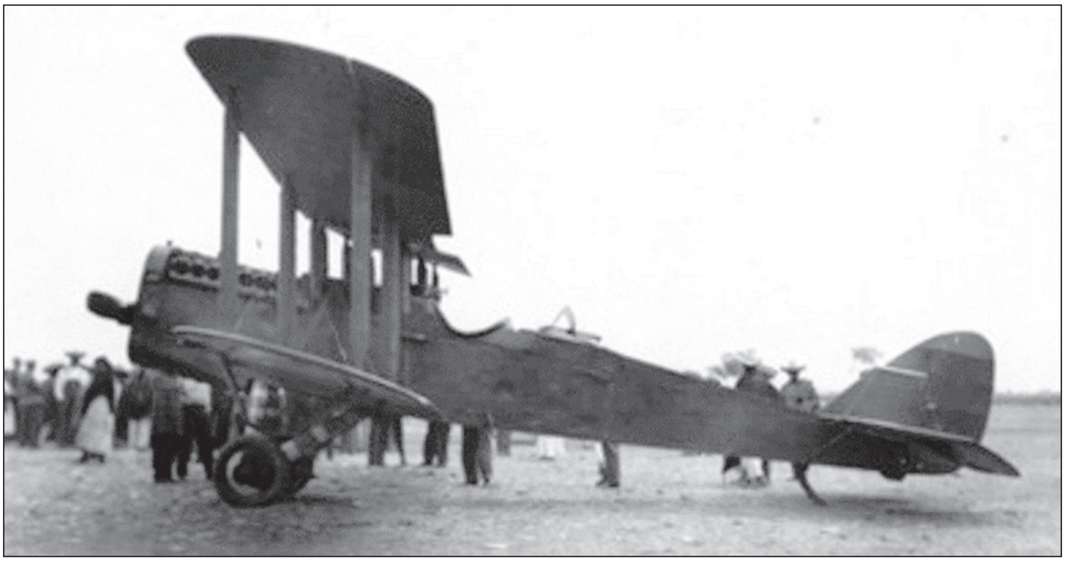
Date	Airplane	Mission	Time
23 January	L.S.	Reconnaissance flight, San Antonio, Guanajuato	04:00
	DH.4B	Armed reconnaissance flight, Ocotlán, Jalisco	No data
	DH.4B	Reconnaissance flight, Guadalajara, Jalisco	No data
	DH.4B	Bombing, Acambaro & Morelia, Michoacán	No data
24 January	DH.4B	Reconnaissance flight, Ajuno, Michoacán	01:50
	Farman F.50	Bombing, Acambaro & Morelia, Michoacán	No data
25 January	MS.35C/R	Armed reconnaissance flight, Rondalejo	02:00
	MS.35C/R	Armed reconnaissance flight, Santa Rosa, Guanajuato	01:30
26 January	MS.35C/R	Armed reconnaissance flight, La Cal-El Guaje, Guanajuato	02:00
27 January	MS.35C/R	Armed reconnaissance flight, Sarabia, Guanajuato	01:55
28 January	MS.35C/R	Armed reconnaissance flight, Pueblo Nuevo, Guanajuato	01:30
28 January	MS.35C/R	Armed reconnaissance flight, La Soledad, Guanajuato	01:25
	MS.35C/R	Armed reconnaissance flight, night, Yurecuaro, Michoacán	01:40
29 January	MS.35C/R	Armed reconnaissance flight, Trejo, Guanajuato	01:40
30 January	MS.35C/R	Armed reconnaissance flight, Huascato, Jalisco	02:00
31 January	MS.35C/R	Armed reconnaissance flight, Ocotlán, Jalisco	01:25
	DH.4B	Armed reconnaissance flight, Moroleón – San José – Ocotlán (2 rebel trains with artillery and a machine gun, which was used as AAA, leaflets were dropped on the banks of the river over Poncitlan and in Atequiza)	01:20



The arrival of the US aid in the form of six Lincoln Standard J-1s deployed for bombing and reconnaissance purposes. Notably, some of the aircraft have already received Mexican national markings on their tailfins. (Ing. Enrique Velasco Collection)

overflew Morelia dropping leaflets calling for the rebels to lay down their weapons and abandon the town. Shaken, Estrada's combatants then withdrew from the railway, enabling the troops of *General* Joaquín Amaro to recover the town of La Piedad the same day. Obregón then ordered his engineers to repair the bridge knocked out by the air strike of 11 January, and thus re-activate a vital logistic link.

Reconnaissance operations by O'Neill's aircraft then offered Obregón another advantage: it turned out that in their rush to secure Morelia, the rebels had exposed their flanks. Not keen to fight for the recovery of Morelia, Obregón then ordered an advance from La Piedad on Irapuato, Celaya, and Zitácuaro, all three of which were secured by 31 January, followed by three major railway stations in Toluca, Maravatió, and Guanajuato. It was only through the demolition of two bridges in the Ocotlán area that the rebels managed to stop this advance. That said, while Estrada's offensive on Mexico City was now out of the question, a major showdown for Ocotlán was just a matter of time.



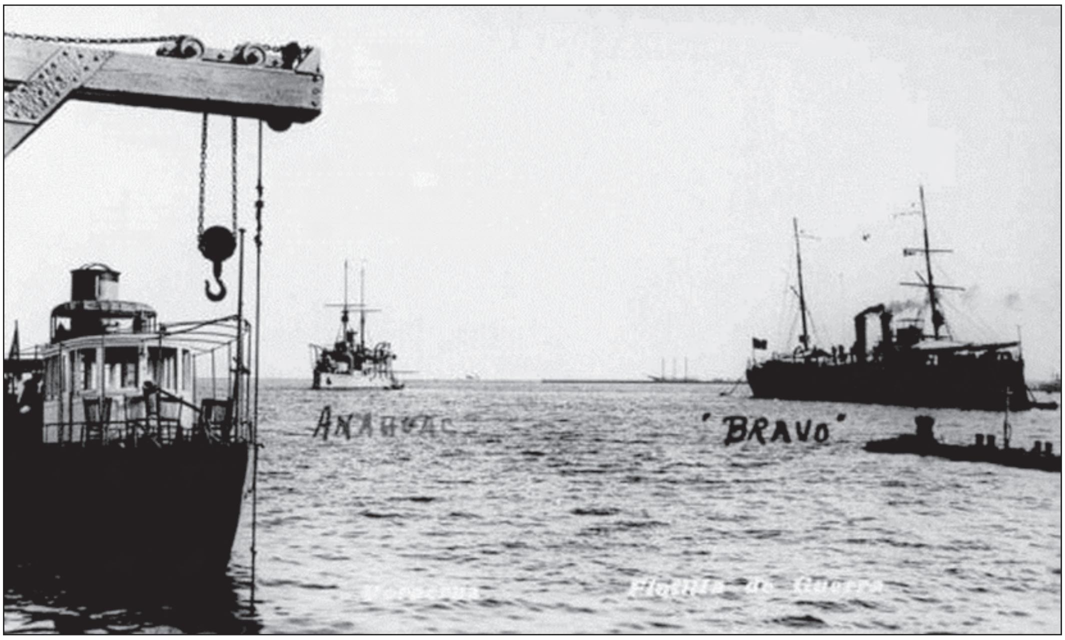
Another aircraft that helped change the tide of the battle was the de Havilland DH.4B. Reportedly, up to 20 were ordered on O'Neill's recommendation (after his meeting with Obregón at Irapuato). Curiously, they appear not to have received bomb racks and were mostly deployed for strafing. (*Archivo General de la Nacion*)

General Obregón (centre, fourth from the left), with *General* Gustavo Salinas, *Coronel* Ralph O'Neill, and numerous other officers and pilots. (*Archivo General de la Nacion*)

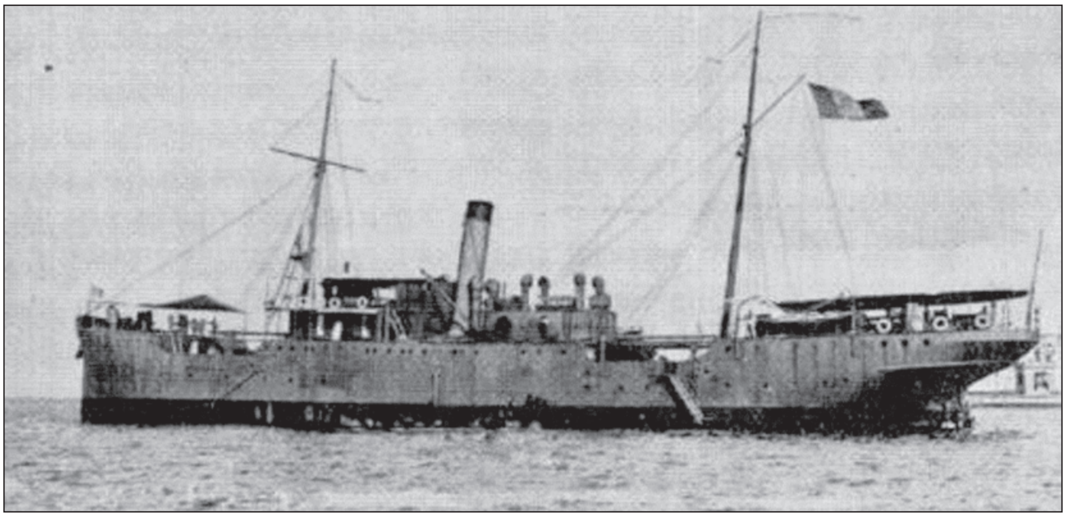
Battle for Ocotlán

Realising that he had overextended his troops and then squandered most of his highly mobile but lightly armed cavalry in the battle for Morelia, Estrada was forced to abandon his designs for Mexico City, and instead to resist Obregón's advance on Guadalajara at any price. He selected Ocotlán as the battlefield: a town on the northeast side of Lake Chapala and a major station on the local branch of the railway. Moreover, the

Coronel Ralph O'Neill with his gunner, *Capitán* Saldana, posing in the cockpit of a DH.4B. O'Neill not only flew, but organised and commanded units in the field. (*Archivo General de la Nacion*)



A good part of the Mexican Navy went over to the rebel side. Amongst these were the coastal defence vessel *Anahuac* and the armed transport *Bravo*, seen here. Eventually, both remained out of trouble. (Manuel Reyna-Garza Collection)

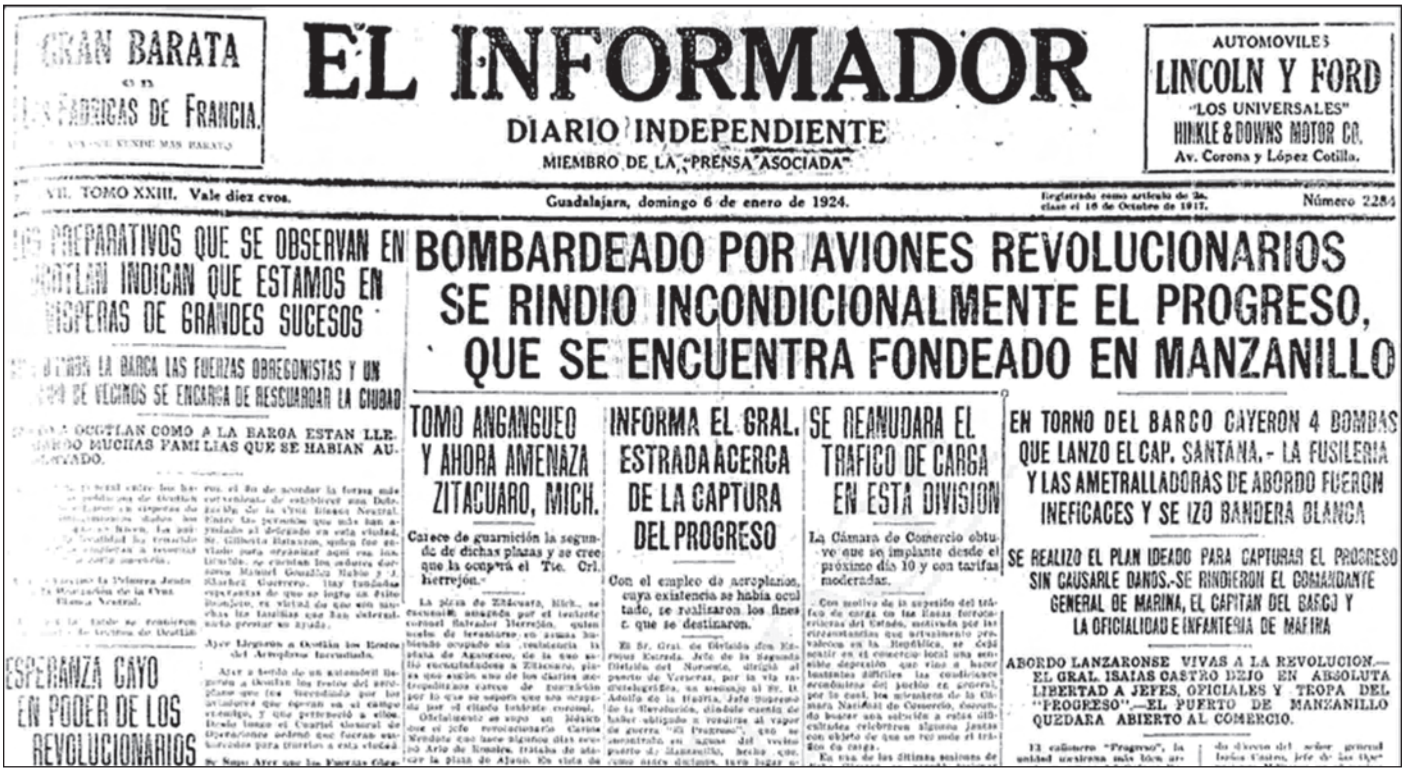


The crew of the Mexican Navy's transport and gunboat *El Progreso* felt forced to surrender after being attacked by one of the rebel-operated F.50Bn2s. (Manuel Reyna-Garza Collection)

local road network was not only well-suited to support cavalry operations, but also motorised vehicles – which was of particular importance because of a group of hills and rugged terrain due north. In preparation for the coming battle, Estrada took advantage of the fact that Ocotlán is divided into two by the Lerma River. Therefore, his engineers mined all the bridges, and constructed a lines of fox holes, trenches, machine gun positions and artillery sangars along the western side of the river. To buy additional time for this construction work, he ordered his rear-guard to conduct intensive delaying actions against Obregón's forces.

However, Estrada did not consider the Military Aviation Service, nor the fact that it was now commanded by an officer highly experienced in advanced deployment of air power. Moreover, he never expected Obregón and O'Neill to construct an operating base just a few kilometres south of Ocotlán. This became operational on 2 February 1924, and photographic evidence indicates that it was used for deployment of DH.4Bs, Lincoln Standards, Avro 504J/Ks and MS.35s.

Thus, and much to the surprise of the rebel commander, almost right from the start of the battle of Ocotlán on 1 February 1924, his positions were exposed to near-constant air strikes by DH.4Bs and Lincoln Standards. Designed to provide protection from frontal fire, but not from above – and often incomplete – the fortifications constructed by his engineers quickly proved insufficient: they were literally swept away by the fire of Federal air power. During the battle, O'Neill's pilots continuously refined their tactics, eventually developing an attack method known as 'the tactical wheel.' Several would fly in a circle around the target, which was



GRAN BARATA
en
LAS FABRICAS DE FRANCIA.

EL INFORMADOR
DIARIO INDEPENDIENTE
MIEMBRO DE LA "PRENSA ASOCIADA"

AUTOMOVILES
LINCOLN Y FORD
"LOS UNIVERSALES"
HINKLE & DOWNS MOTOR CO.
Av. Corona y López Cotilla.

VII. TOMO XXIII. Vale diez cvos. | Guadalajara, domingo 6 de enero de 1924. | Registrado como artículo de 2a. clase el 16 de Octubre de 1917. | Número 2284

LOS PREPARATIVOS QUE SE OBSERVAN EN OCOTLAN INDICAN QUE ESTAMOS EN VISPERAS DE GRANDES SUCESOS

OCUPARON LA BARCA LAS FUERZAS OBREGONISTAS Y UN GRUPO DE VECINOS SE ENCARGA DE RESGUARDAR LA CIUDAD

TANTO A OCOTLAN COMO A LA BARCA ESTAN LLEGANDO MUCHAS FAMILIAS QUE SE HABIAN AUSENTADO.

ESPERANZA CAYO EN PODER DE LOS REVOLUCIONARIOS

BOMBARDEADO POR AVIONES REVOLUCIONARIOS SE RINDIO INCONDICIONALMENTE EL PROGRESO, QUE SE ENCUENTRA FONDEADO EN MANZANILLO

TOMO ANGANGUEO Y AHORA AMENAZA ZITACUARO, MICH.

Carece de guarnición la segunda de dichas plazas y se cree que la ocupará el Tte. Crl. Herrejón.

INFORMA EL GRAL. ESTRADA ACERCA DE LA CAPTURA DEL PROGRESO

Con el empleo de aeroplanos, cuya existencia se había ocultado, se realizaron los fines a que se destinaron.

SE REANUDARA EL TRAFICO DE CARGA EN ESTA DIVISION

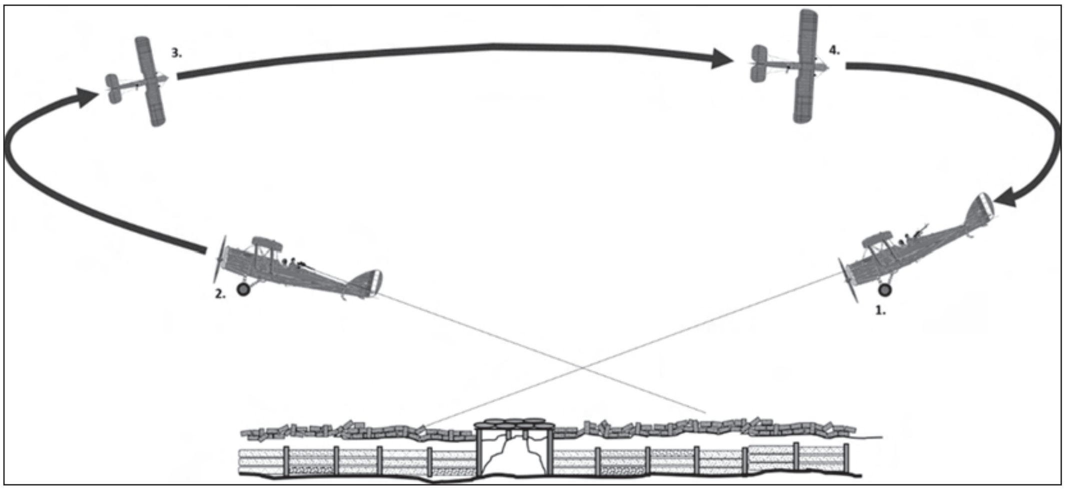
La Cámara de Comercio obtuvo que se implante desde el próximo día 10 y con tarifas moderadas.

EN TORNO DEL BARCO CAYERON 4 BOMBAS QUE LANZO EL CAP. SANTANA.- LA FUSILERIA Y LAS AMETRALLADORAS DE ABORDO FUERON INEFICACES Y SE IZO BANDERA BLANCA

SE REALIZO EL PLAN IDEADO PARA CAPTURAR EL PROGRESO SIN CAUSARLE DAÑOS.-SE RINDIERON EL COMANDANTE GENERAL DE MARINA, EL CAPITAN DEL BARCO Y LA OFICIALIDAD E INFANTERIA DE MARINA

ABORDO LANZARONSE VIVAS A LA REVOLUCION.—EL GRAL. ISAIAS CASTRO DEJO EN ABSOLUTA LIBERTAD A JEFES, OFICIALES Y TROPA DEL "PROGRESO".—EL PUERTO DE MANZANILLO QUEDARA ABIERTO AL COMERCIO.

An account from the newspaper *El Informador*, about an air strike on the Federal gunboat *El Progreso*, which was blocking the rebel-controlled Port of Manzanillo. (*Hemeroteca El Informador Guadalajara*)



The 'Tactical wheel system' used by Federal pilots to strafe trenches at Ocotlán. (Diagram by Manuel Reyna-Garza)

under a near-constant attack by at least one of them: that way, the defenders proved unable to fire back. Trench lines were attacked by pilots flying along them and targeting the infantry below with their front Merlin machine guns: in turn, their gunners/observers would spray the trench line with the fire from their Lewis machine guns. They would then distance and fly a circle, so the gunner could reload his machine gun before the next strafing run. Such air strikes were always repeated until the crew exhausted all the ammunition on board – or the aircraft was shot down. Obviously, both tactical methods were developed during the last year of the First World War and brought to Mexico by O'Neill.

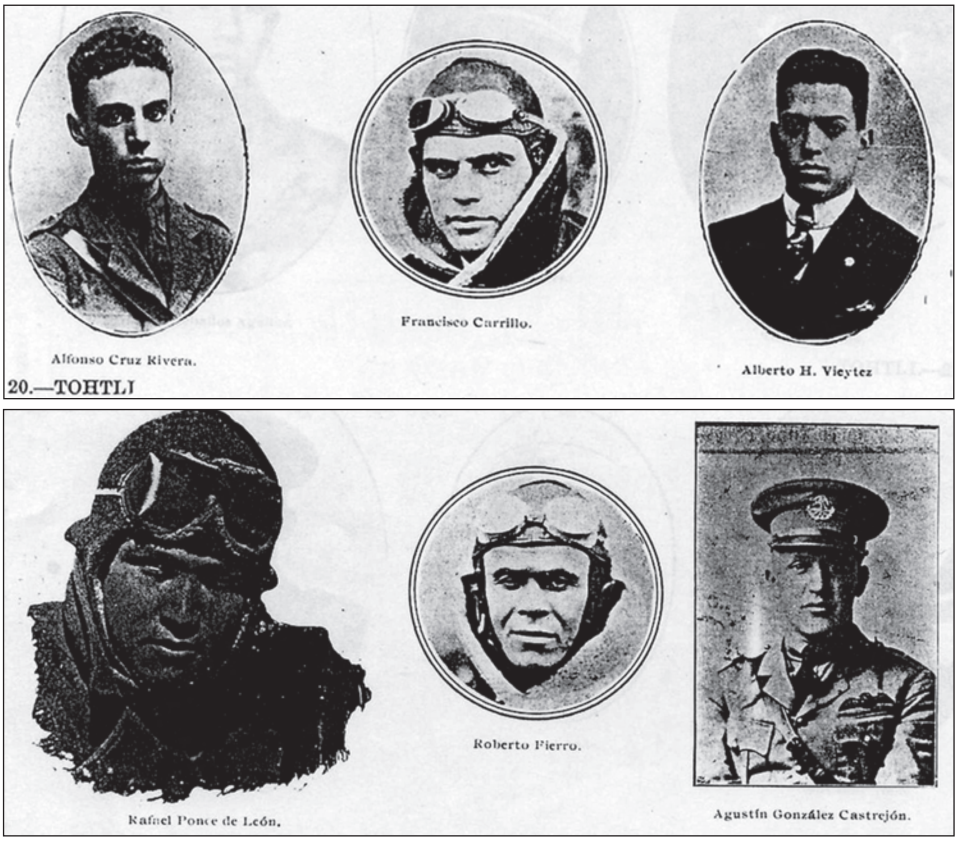
Facing such a ferocious onslaught, Estrada ordered his cavalry – much of which consisted of indigenous soldiers from the Juchitán District (Oaxaca) – to attack the flanks of the approaching Federals, foremost a column commanded by Joaquín Amaro. The rebel cavalry was detected by a flight of DH.4Bs of Roberto Fierro's command on 4 February, as it was moving along Lake Cuitzeo in the direction of Valle de Santiago. Almost immediately after receiving this report O'Neill ordered all the available de Havillands into a counterattack. In a series of quickly organised sorties, they hit the column so heavily and decisively, that most of it was destroyed and the survivors dispersed: only small groups were subsequently tracked by aircraft, all badly demoralised by the havoc the aviation wreaked on them.

EL GRAL. OBREGON CON TRES ESPIAS QUE VENIAN DE MORELIA.

Obregón not only commanded better organised and equipped forces, but also had a well-functioning network of informers in the cities occupied by the rebels. This photograph shows him with three informers from Morelia. (via Manuel Reyna-Garza)

This action and continuous air strikes on the positions in Ocotlán eventually prompted Estrada into launching a desperate attempt to cross the Lema River and dislodge the Federals from their positions on the other bank on 9 February 1924. The ferocity of the fighting reached such proportions, that more than 2,000 casualties were registered on both sides combined within less than 24 hours. Some of the DH.4Bs strafed and bombed from such low altitudes, that after returning to the base at Irapuato, *Capitán* Alfredo Lezama concluded: 'I was concerned that when bombs would explode, we would not get out, because the fragments would hit us!'

In turn, a Lincoln Standard piloted by Roberto Fierro was hit by ground fire, forcing him to make an emergency landing amongst houses on the Federal-held side of the river. Fighting was not limited to Ocotlán alone: the offensive was supported by a cavalry raid aimed to cut off the Federal communication links. However, the latter was quickly detected by aircraft and beaten back by loyalist cavalry supported by aviation in a short clash near Palo Verde.

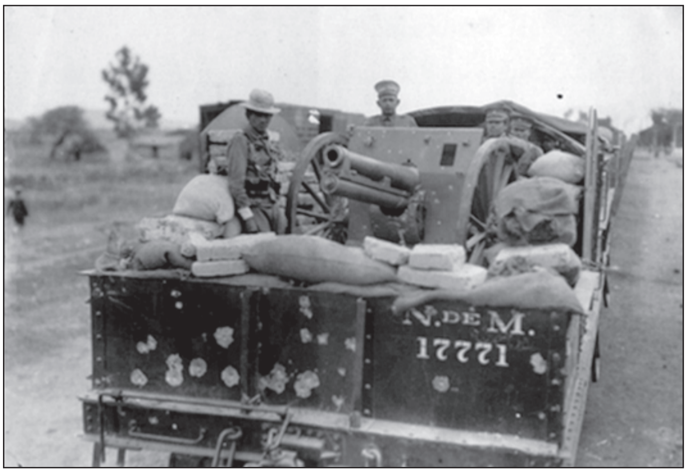

20.—TOHTLI
Alfonso Cruz Rivera.
Francisco Carrillo.
Alberto H. Vieytez
Rafael Ponce de León.
Roberto Fierro.
Agustín González Castrejón.

Several future chiefs of the Mexican Air Force experienced their baptism of fire during the De la Huerta Rebellion. Among them were Roberto Fierro, Alfonso Cruz Rivera, and Alberto H Vieytez. (*Revista Tohtli*)

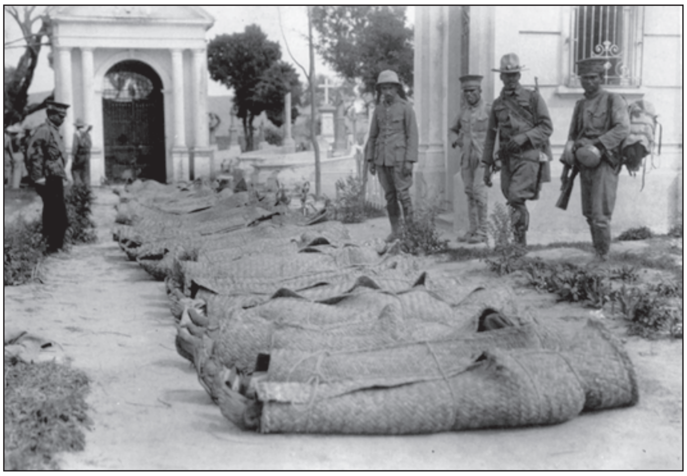
With air support and reinforcements from the Federal Army from Sonora, the volunteers of the Yaqui Indian tribe, the Mayas from the Yucatan Peninsula, and Juchitecos from the region of the Isthmus of Tehuantepec in the north – the crossing of the Lerma River began by swimming before an improvised bridge was assembled with the help of whatever material was available. All of this under heavy enemy fire, which ceased only once the indigenous troops stormed the trenches, causing the withdrawal of the rebels.

On 10 February 1924, after the Federal victory at Ocotlán, Obregón – taking advantage of Estrada's arrogance, his decision to stay in place to rest and reorganise, and the failure of the rebel press to report the defeat and eviction from this strategic position – entrenched his troops in the area. This was just in time, because several minor units of ill-informed rebel cavalry and irregular troops converged on the area in attempt to strengthen its defences, which no longer existed. Unsurprisingly, most were killed or captured by superior Federal troops. Correspondingly, on the next day reconnaissance flights were undertaken all over the Ocotlán and out to Guadalajara, as well as long the railways to Irapuato, Morelia, León, Celaya, Guanajuato, and Mexico City. These confirmed the involvement of one of the Farman F.50Bn.2s captured in December 1923 although, even at the peak of the Battle of Ocotlán, they were never used.

By 12 February, the Federal Army entered Guadalajara, deposing the rebel authorities and restoring the Federal administration. The Las Juntas airfield was occupied in the process, where the Farmans



During the battle of Ocotlán the Federal forces converted numerous trains into artillery platforms. (Manuel Reyna-Garza Collection)



Bodies of *Delahuertista* rebels about to be buried at the cemetery of Ocotlán. Notably, Mexican Catholics frowned upon the idea of leaving a body unburied. At the time, soldiers would sleep on mats of woven palm threads known as *petate* (also used as a duffel bag), and most were buried wrapped in these. Thus came into being the current Mexican synonym for death: *Petatearse*. (Manuel Reyna-Garza Collection)

Table 7: Known Sorties of the Military Aviation Service, early February 1924

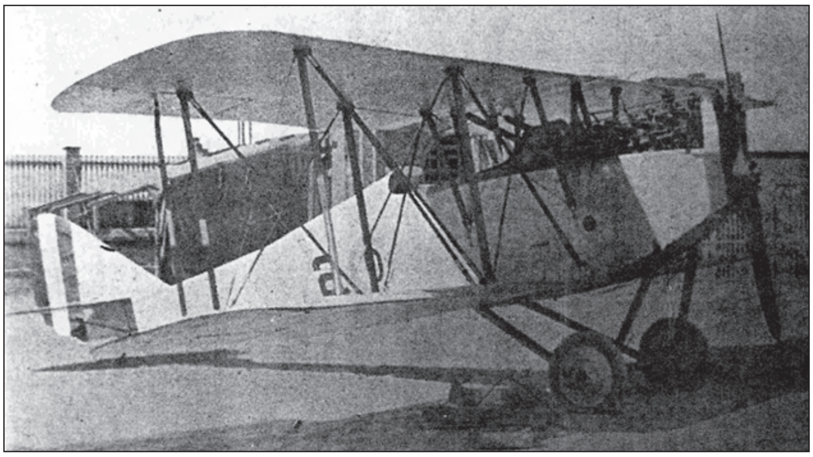
West Front (Irapuato Forward Operating Base)			
Date	**Airplane**	**Mission**	**Time**
01 February	DH.4B	Strafing against rebel trenches in Ocotlán	No data
	L.S.	Bombing against Ocotlán	03:50
Ocotlán Forward Operating Base			
02 February	L.S.	Armed reconnaissance flight, Ahuatlan, Jalisco	04:00
	DH.4B	Strafing against rebel trenches in Ocotlán	No data
03 February	DH.4B	Armed reconnaissance flight, Zapotlan del Rey, Jalisco	03:30
	DH.4B	Strafing against rebel trenches in Ocotlán	No data
04 February	DH.4B	Armed reconnaissance flight, Juanacatlan, Jalisco	03:05
	DH.4B	Armed reconnaissance flight, Carrosas, Jalisco	03:50
	DH.4B	14 airplanes in air attack (machine-gunning and bombardment) against enemy cavalry column on the margins of Lake Cuitzeo, Michoacán	No data
05 February	L.S.	Armed reconnaissance flight, Carrosas, Jalisco	03:50
	L.S.	Armed reconnaissance flight, Otrerillo, Jalisco	04:00
	DH.4B	Strafing against rebel trenches in Ocotlán	No data
06 February	L.S.	Reconnaissance flight, Guadalajara, Jalisco	03:40
07 February	L.S.	Armed reconnaissance flight, Zapotlanejo, Jalisco	04:00
	L.S.	Armed reconnaissance flight, Cajititlan, Jalisco	03:30
08 February	L.S.	Armed reconnaissance flight, Tolotlan, Jalisco	03:45
09 February	DH.4B	Strafing against rebel trenches in Ocotlán	No data
	DH.4B	Armed reconnaissance flight (due to lack of identification panels, Capt. De León mistakenly attacked a Federal column that crossed the Lerma bridge, causing some minor casualties as the pilot discovered the mistake he was making)	No data
	DH.4B	Bombing against rebel artillery in Ocotlán (Lt. Tte. Cruz and Tte. Lezama)	No data
	L.S.	Armed reconnaissance flight (aircraft hit by enemy fire and a forced landing, Tte. Fierro on board, in friendly lines), Ocotlán, Jalisco	No data
	L.S.	Armed reconnaissance flight, Canutillo, Michoacán	03:50
10 February	L.S.	Reconnaissance flight, Guadalajara, Jalisco	03:55
11 February	L.S.	Reconnaissance flight, Paredones, Jalisco	03:55
	L.S.	Reconnaissance flight, El Canastillo (Camautillo, Michoacán)	03:50
	L.S.	Reconnaissance flight, Guadalajara, Jalisco	00:30

and their crews were captured.[3]

A day later, the battle of Palo Verde was fought in Michoacán by Estrada in a vain attempt to attract Obregón's attention and force him to abandon Guadalajara. Here the Federal rear-guard defeated the rebels with support of the MAS, the aircraft of which flew observation and strafing attacks. Roberto Fierro is known to have flown two sorties during this clash, including a reconnaissance sortie to confirm the victory of Federal troops led by *General* Escobar. Meanwhile, the Military Aviation Service quickly brought the Guadalajara airfield into service and from there supported the advance on the Port of Manzanillo in Colima. Lacking supplies, and left to their own device, the rebels now began falling apart: many chose to abandon the fight – especially after being subjected to attacks by aircraft against which they had no effective means of defence. Their morale was also greatly influenced by leaflet-dropping operations of the MAS.

Collapse in the South

Meanwhile, the Federal advance in the south went on. On 20 February 1924, the Army advanced south of Jalisco, but encountered little, if any, armed resistance. The principal reason were effective negotiations, including guarantees of parole to all the troops that had joined the rebels. Following his liberation and return to duty, Cárdenas was assigned the mission of regaining the control of the small state of Colina, and the Port of Manzanillo, where several ships captured by the rebels were anchored. The Federal attack began with an air strike by several MAS aircraft, which hit selected rebel positions around the town and promptly proved decisive as the rebels capitulated. A day later, Cárdenas arrived in a Lincoln Standard to establish his headquarters in Colina. Knowing to appreciate the rebels' care for his life and health, Cárdenas continued offering pardon to those who surrendered, and thus quickly pacified the



Italian-made Ansaldo A.300/2 reconnaissance and bombing aircraft of the MAS. Alternative sources report this as an A5 biplane. The aircraft was lost in an accident in the Chimalhuacan area, in Estado de Mexico, in which the crew, Espejel and Moreno, were killed. (Manuel Reyna-Garza Collection)

Table 8: Known Sorties of the Military Aviation Service, early February 1924

Date	Airplane	Mission	Time
Las Juntas, Guadalajara Airfield			
12 February	L.S.	Armed reconnaissance flight, Ciudad Guzman, Jalisco	03:40
Ocotlán Campaign Airfield			
13 February	DH.4B	Air attack, Palo Verde, Michoacán	No data
	DH.4B	Armed reconnaissance flight, Palo Verde, Michoacán	No data
Las Juntas, Guadalajara Airfield			
13 February	L.S.	Armed reconnaissance flight, Jacotepec, Jalisco	03:40
	L.S.	Armed reconnaissance flight, Sebastianillo, Jalisco	04:00
14 February	L.S.	Armed reconnaissance flight, Atoyac, Jalisco	03:30
	L.S.	Armed reconnaissance flight, Saluya, Jalisco	03:25
15 February	L.S.	Armed reconnaissance flight, Pie de Puerco, Jalisco	03:05
	L.S.	Armed reconnaissance flight, Cuyucapán, Jalisco	03:51
16 February	L.S.	Armed reconnaissance flight, Los Cerritos, Jalisco	03:45
	L.S.	Armed reconnaissance flight, Colima, Colima	03:55
17 February	L.S.	Armed reconnaissance flight, Zapotitlán, Jalisco	03:50
18 February	L.S.	Armed reconnaissance flight, San Jose del Carmén, Jalisco	03:55
19 February	L.S.	Armed reconnaissance flight, San Martín	03:15
20 February	L.S.	Armed reconnaissance flight, Colima, Colima	03:55
	DH.4B	Bombing Colima, Colima	No data
21 February	L.S.	Air Transport of General Cárdenas to Colima	01:00

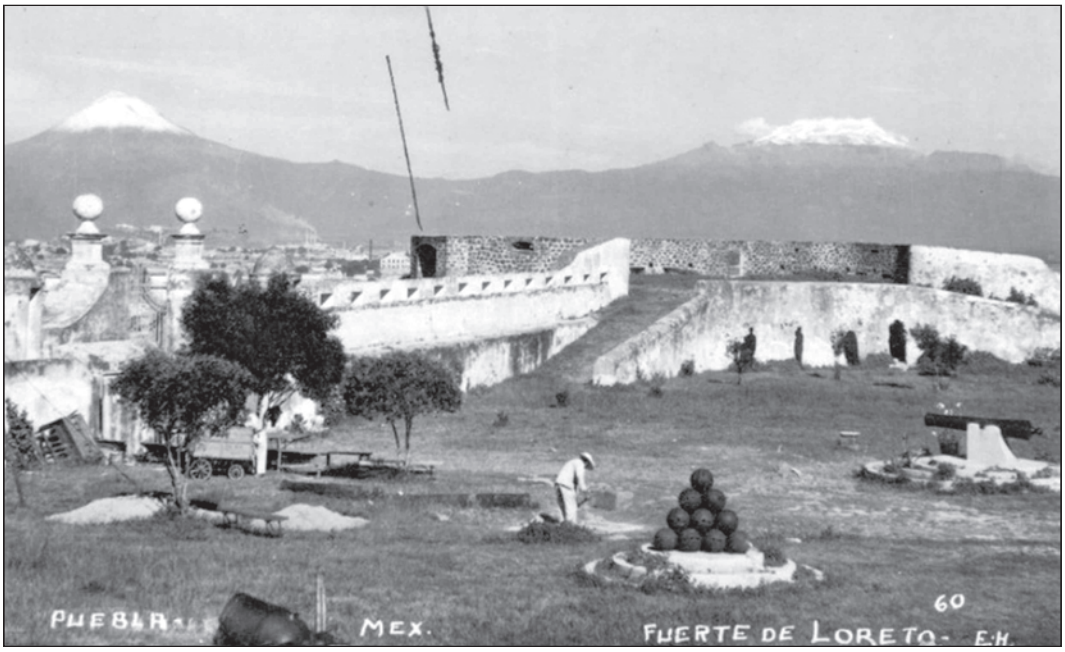
area: all combat operations on the western front were thus over by 28 February 1924. All attention now swung to the *Orient* (east).

Orient Front

Following initial advances of December 1923, the rebels failed to coordinate their forces and thus never managed to drive all the way to the Mexico City: the gates to the capital were wide open once they had secured the town of Puebla on 14–15 December, and then reached the train station of Aljibes and the town of Tlaxcala. Instead, they spent the time establishing their own government and headquarters in Veracruz. Arguably, this was necessary because the rebellion received much support not only from the population, but from the local banks and the chamber of commerce, both of which were happy to lend a hand with financial loans (possible thanks to the income from the customs). To a degree, this was unsurprising because De la Huerta had served as the Secretary of Commerce and Finances and was expecting to receive support from the USA in the form of arms and ammunition shipments, but also political backing.

The Federal Army exploited the rebel inactivity to quickly mobilise and secure not only all the local railways, but also major roads. Moreover, aircraft of the MAS were brought into action, and after a series of reconnaissance flights and several air strikes, by 22 December the rebels were forced to retreat to the state of Veracruz. This bought the time for the government in Mexico City to complete its purchase of war material, and secure political backing of the administration of the US President Calvin Coolidge. Perhaps more importantly, the US promised not to sell any arms to the rebels, to block ports controlled by them, and thus prevent any contraband from reaching them. This came in handy with the rebel defeat at Puebla, and the heavy loss of material and personnel – especially because almost no prisoners were taken: the Yaqui soldiers had the tendency to kill whatever enemy they encountered, causing panic among civilians and combatants alike.

Certainly enough, in the days before 22 December 1923, the rebel press reported that two veteran aviators had joined their cause: reportedly, these were Captain E. W. Quinland (ex-Royal Air Force) and Captain J. Bronjette (ex-Aeronautical Service of the French Army), and that both were at Marfa, in Texas.[4]



The fort of Puebla was built around existing churches on the heights that dominated the city. While proving highly efficient for fighting an enemy trying to approach them on the ground, they were totally unprotected from air attack. (Manuel Reyna-Garza Collection)

The Cuitzeoo Bridge, destroyed by the *Estradista* rebels in Ocotlán in 1924. (Manuel Reyna-Garza Collection)

Delahuertista trenches along the western bank of the Lerma River, in Ocotlán. Notable is the quality of work and material used, making these positions anything but improvised. (Manuel Reyna-Garza Collection)

However, after that, nothing was reported about either of the two: during the following days, warships of the US Navy blocked the ports of Tampico, Veracruz, Puerto México and Progreso in the Gulf of Mexico. The railway connecting Veracruz with the United States via Tampico and Ciudad Juárez was cut off by Federal forces. The results were unavoidable and immediate: lots of business had to shut down due to the lack of goods, while prices of food and other commodities shot up. Within days, the Chamber of Commerce of Orizaba began resisting demands to provide loans to the rebel government.

Atop of the growing economic crisis, De la Huerta began meddling in military decisions, creating growing confusion among his generals. For example, he ordered his troops to free Federal prisoners, thus leaving them to rejoin their forces, and ordered several retreats without combat; and while compensating his rivals financially to win their support, he repeatedly failed to pay his troops, causing many to question his appointment as the leader.

Counteroffensive and Desertions

The Federal Army took only about 15 days to ready an offensive. Almost as soon as this was initiated, on 10 January 1924, rebel commander Marcial Cavazos withdrew his forces from Pachuca (Hidalgo) into the nearby mountains. A day later, *Mayor* Alfonso Virgen – with copilot *Teniente* Eliseo Martin del Campo, *Teniente* Andres de la Sierra, and mechanic *Sargento* Agustín Alfaro were sent from Puebla on a reconnaissance of Amozoc and Tehucan in Junkers JL-6 monoplane serial number 1-E-81. The crew did its duty, making notes on observations and dropping leaflets, when – all of a sudden – Alfonso Virgen landed the aircraft in the rebel-controlled territory, and declared his defection. While the crew managed to escape and return to the Federal lines, the aircraft was disassembled and shipped by train to Veracruz: stored there, it was not re-assembled nor saw any action again.

The MAS continued flying reconnaissance, nevertheless, and on 14 January 1924 suffered another, painful loss, when the Ansaldo A5 crashed for unknown reasons outside Chilmalhuacan, killing the crew of two (including *Capitán* Espejel and *Teniente* Moreno). The rebel press exploited the opportunity to brag about the poor manufacturing quality and even poorer condition of the aircraft, both of which was incorrect.

On 28 January 1924, the Federal Army defeated the rebels in the Battle of Esperanza (Puebla), prompting De la Huerta to order a withdrawal to Veracruz, and a transfer of his headquarters to the fortress of San Juan de Ulua in the local port. The MAS exploited this advance to construct an airfield in Puebla, which enabled its aircraft to fly deep over the rebel-controlled states of Veracruz and Tabasco – even more so once its ranks were reinforced by aircraft and airmen from the western front, once the fighting there was concluded successfully.

The Port of Veracruz was largely secured by the Federals commanded by *General* Eugenio Martínez on 5 February 1924, and the MAS promptly constructed its next airfield – this time near the railway station of Ojapa. Colonel O'Neill arrived to assume the command together with a group of young lieutenants, including Pablo Sidar, Fernando Huerta Campuzano, Alfredo Lezama Álvarez,

Table 9: Known Sorties of the Military Aviation Service, early March 1924

East Front (Ojapa, Veracruz Campaign Airfield)			
Date	**Airplane**	**Mission**	**Time**
2 March	DH.4B	Armed reconnaissance flight, Coalcomán-Coalcomán Mountains	03:55
2 March	DH.4B	Bombing, of Ojapa, Puerto México and Minatitlan	03:55
East Front (Ojapa, Veracruz Campaign Airfield)			
5 March	DH.4B	Armed reconnaissance flight, Coalcomán-Noloacán- Coalcomán	03:30
6 March	Junkers JL-6	Reconnaissance flight from the Puebla Airfield, engine failure and forced landing, aircraft destroyed by the crew itself to avoid use by the rebels	No data
7 March	DH.4B	Armed reconnaissance flight, Hidalgotitlan, Veracruz	03:55
8 March	DH.4B	Armed reconnaissance flight, Loma Larga, Veracruz	03:55
9 March	DH.4B	Armed reconnaissance flight, Ocosocotepec, Veracruz	04:00
10 March	DH.4B	Armed reconnaissance flight, Los Cerritos, Veracruz	03:30
11 March	TNCA Salmson	Reconnaissance flight, Santa Ana – C. Fournier – Coasts of Veracruz (Gulf)	02:45
12 March	TNCA Salmson	Armed reconnaissance flight, Minatitlan-S.F.R. Nuevo Minatitlan, Veracruz	04:30

Luis Farell, and Waldo Martin del Camp, with several Lincoln Standards and DH.4Bs. Whenever carrying just half their maximum load of bombs, these proved capable of ranging all over Veracruz and Tabasco, and flying so many air strikes that their actions became clearly detrimental for the rebel cause. The effects of the air strikes, combined with the lack of effective military leadership soon began causing desertion within rebel ranks. For example, a large unit of troops sent to the port of Tabasco on board the tanker *San Leonardo* and the merchant *Tamaulipas* with the aim of reinforcing the garrison of Veracruz, surrendered on arrival out of fear of an aerial attack.

The condition of the rebel forces was further worsened by De la Huerta's flight from Veracruz to Frontera Tabasco before the Federals had secured the crucial port. With him, the rebel leader took many others, some of whom fled aboard the ships *Agua Prieta*, *Covarrubias*, *Azueta*, *Tamaulipas*, *Tabasco*, and *San Leonardo*, leaving just the school ship *Zaragoza* – commanded by *Capitán* Alfonso Calcaneo – and 80 Marines behind to maintain order in the port. For three days, the Marines fought the Federals in the port, until forced to evacuate to the *Zaragoza* and then withdraw to the Port of Tabasco, on 11 February 1924. By coincidence, this was the same day on which Obregón defeated the rebels at Palo Verde station. With these two blows, the uprising was reduced by two thirds.

Meanwhile, at 06.00hrs local time on 6 February, *Mayor* Samuel Rojas took off with Junkers-Larsen JL-6 serial number 1-E-82. With Rojas was the crew consisting of *Teniente* Rafael Albarran, and *Sargento 1/o* Federico Velazco. Their task was reconnaissance of the Chalchicomula Puebla area. Once there, due to mechanical issues, they were forced to make an emergency landing. Almost immediately, the aircraft was surrounded by rebels and the crew taken captive. Of course, all were offered the opportunity to join the rebellion: initially, Rojas and his crew refused, but after threats and bribes, and guarantees for the respect of their ranks, they decided to play along. Of course, the three airmen had to check the aircraft and see if the damage was repairable. Their request was granted, but the damage proved irreparable in field. Therefore, Rojas and his crew let fuel spill into the cabin and then set the aircraft on fire – much to the surprise of the rebels. All three airmen were liberated once the Federals took the town of Oaxaca, and returned to Mexico City on 8 April 1924.[5]

In the meantime, on 11 February 1924, the Federals initiated their final campaign by *Generals* Calles, Ignacio Enriquez and Marcelo Caraveo, unleashing around 4,000 troops supported by eight aircraft of the MAS – including the surviving TNCA Serie Bs – in the Parral Chihuahua area. Conducted without support of artillery or other types of heavy armament, this operation was characterised by rapid movement of irregular cavalry, and the aircraft proved crucial for tracking about 1,800 rebels commanded by José Moran, which, reportedly, were supported by two aircraft, supposedly flown by US mercenaries. The MAS reconnaissance never found any evidence of rebel airplanes – which was rather unsurprising. The rebels did have at least one aircraft in their hands – the captured JL-6 serial number 1-E-81 – but no crew for it and consequently, on 21 February, they ditched it into the Tuxpan Veracruz River in the Huasteca area.

General Izquierdo's Initiative

In March 1924, *General* Donato Bravo Izquierdo – who led a part of the Federal Army on the southern front – managed to secure the services of two pilots recently graduated from the military aviation school in the Republic of Chile: Carlos Christiany and José Zertuche. Because he had no aircraft assigned to his area of operations, Izquierdo found a way to purchase one 'Cambron' biplane (actually a single-engined Caudron G.III biplane) from Italian pilots living in El Salvador. The arrangement envisaged one of the Italians, upon the receipt of the payment, to fly the aircraft to Mexico. However, the Italian suffered an accident on take-off during the transfer, in which the aircraft was completely wrecked, though he suffered no injuries. Rather unsurprisingly, eventually it turned out that the Italian was paid by the rebels not to deliver the aircraft.

Nevertheless, Izquierdo persisted and was eventually successful. On 13 and 14 March 1924, O'Neill – recently promoted to the rank of *general* – arranged the delivery of a flight of four de Havilland DH.4Bs by ship to the port of Salinas Cruz (Oaxaca). Moreover, suitably qualified pilots arrived together with the aircraft, including now *Capitán* Roberto Fierro Villalobos, *Capitán* Pablo L. Sidar, *Capitán* Rafael Montero Alfredo Lezama, and German flight instructor Fritz Bieler (a veteran of the First World War and former instructor of the aviation school).

The four de Havillands were transferred by train to Ojapa (Chiapas). While still underway a fire broke out that damaged the wings of three aircraft, and thus only one arrived in operational condition. *Capitán* Sidar had it assembled at Ojapa, and undertook the first test flight, while Fierro travelled back to Mexico City with the other three to have them repaired and to train additional pilots.

Table 10: Known Sorties of the Military Aviation Service, late March 1924

East Front (Ojapa, Veracruz Campaign Airfield)

Date	Airplane	Mission	Time
21 March	DH.4B	Armed reconnaissance flight, Mexico Port (Coatzacoalcos, Ver.), attack on rebel gunboat *Zaragoza* and two other ships in the river, by aviators Sidar and Lezama	No data
22 March	DH.4B	Armed reconnaissance flight, Aldama, Tabasco	03:50
24 March	DH.4B	Armed reconnaissance flight, Tecalutilla, Tabasco	03:30
25 March	DH.4B	Armed reconnaissance flight, Comacalco, Tabasco	02:00
26 March	DH.4B	Armed reconnaissance flight, Cunduacan, Tabasco	05:50
27 March	DH.4B	Armed reconnaissance flight, Cupilco, Tabasco	03:50
28 March	DH.4B	Armed reconnaissance flight, San Francisco Rio Viejo, Tabasco	03:15
29 March	DH.4B	Armed reconnaissance flight, Mecatepec, Tabasco	03:45
30 March	DH.4B	Armed reconnaissance flight, Heroica Cárdenas, Tabasco	04:00

Subsequently, and using unknown aircraft, another flight was established at Minatitlan (Veracruz), where *General* O'Neill, Fritz Bieler and *Capitáns* Luis Farell, Montero Ramos, and – later on – Sidar, flew them.

Final Operations

By 30 March 1924, the MAS was able to forward-deploy a flight of aircraft commanded by Montero to San Antoli, close to Tonala Chiapas. From there, the unit supported the advance on Tuxtla Gutiérrez, the capital of the state of Chiapas.

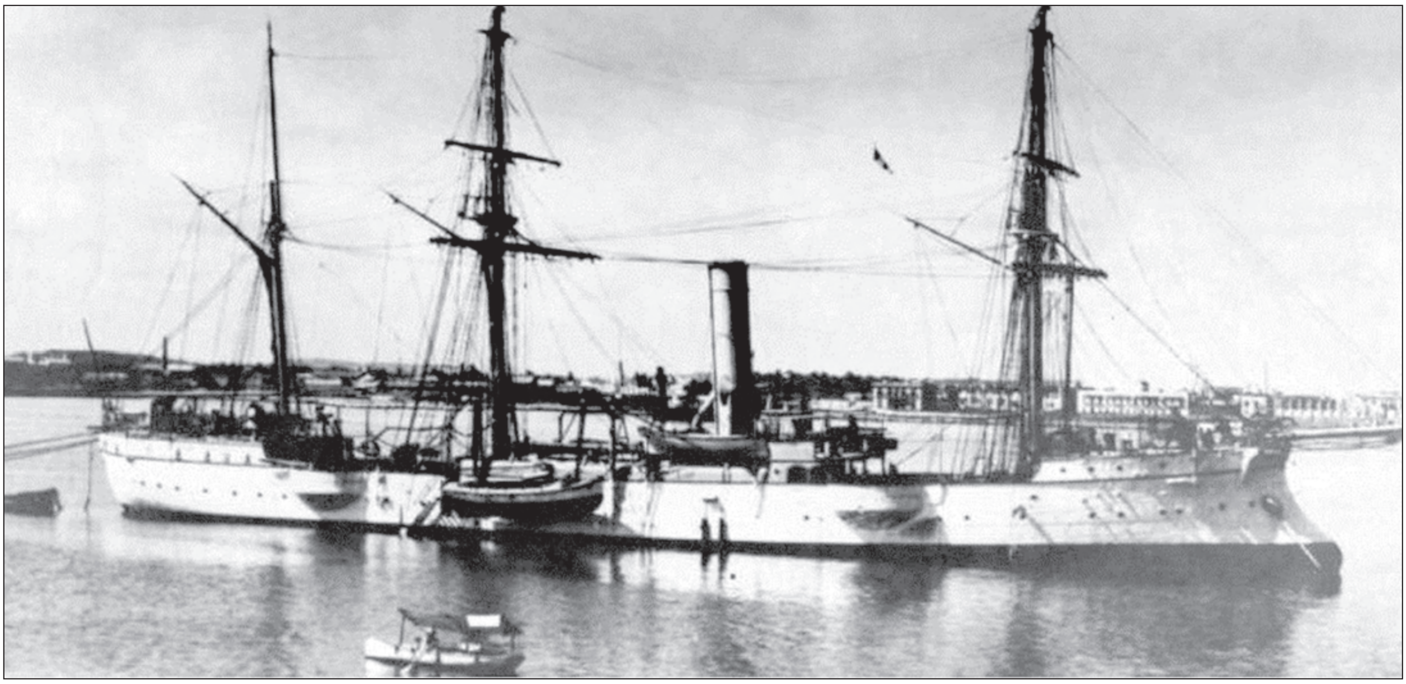
By this time, the Military Aviation Service had two *Escuadrillas* (flights) deployed as follows:

- Chihuahua Flight: commanded by Alberto H. Vieytez, operated a miscellany of aircraft that supported the mopping-up in the state. The Flight included *Capitán* Antonio Duran G. Adolfo Pina and *Teniente* Humberto Brutini (an Italian veteran of the First World War)
- Huasteca Potosina Flight: commanded by Agustín González Castreión, this flight operated a miscellany of aircraft piloted by *Capitáns* Francisco Carrilo, Alfonso Ceballos Aguilar, and Everardo Huacuja, and *Teniente* José G. Lertuche

Later during the month, the three repaired DH.4Bs were made operational again. They were formed into a flight commanded by Roberto Fierro and including Pablo Sidar and the US pilot named Gish. This unit was sent to Pachuca which was on the verge of being overrun by forces of the rebel *General* Marcial Cavazos. Upon arrival, Sidar nonchalantly went to visit his old friends serving with the cavalry. Thus, when the final rebel assault came, he could not be found: only Gish and Fierro managed to evacuate their aircraft. To the good fortune of the third Mexican pilot, the assault was repelled, and he and his de Havilland thus survived the battle without any damage.

A few days later, and on order from the Secretary of War and Navy, the forward-deployed force was reorganised. A new *escuadrilla* commanded by Sidar – and including *Capitáns* Alfredo Lezama and Waldo Martin de Campo – was established to operate over the states of Tabasco and Veracruz. Sidar and his crews undertook several nocturnal bombing raids against rebel ships in the Coatzacoalcos River. For example, on 21 March 1924, *General* Francisco Serrano sent the following telegram to *General* Obregón:

> A de Havilland aircraft flown by commanders Sidar and Lezama undertook a reconnaissance flight over Puerto México, where



The Mexican Navy armoured cruiser *Zaragoza*, which was subjected to air strikes by Federal pilots Sidar and Lezama and suffered damage to her decks due to machine gun fire. (Manuel Reyna-Garza Collection)

An Interview with a Pilot

During the final phase of De la Huerta's rebellion, the aviation magazine *Tohtli* received a chance to interview *Mayor* Gustavo de León, a MAS pilot. He reported to have flown his DH.4B over the states of Jalisco, Guanajuato, and Durango, early on, before being sent north in April to support the forces of *General* Vicente Gonzalez while flying a Salmson. Afterwards, he was redeployed to Minatitlan from where he flew reconnaissance and air strikes against the rebel-held Frontera. One of his flights from this airport lasted no less than 3 hours and 30 minutes.

De León reported that in San José del Carmen, O'Neill destroyed the rebel headquarters using bombs, and also dropped provisions for troops that were advancing on Villahermosa. Furthermore, he mentioned that the MAS destroyed a rebel radio station, and days later attacked a rebel force led by *General* Segovia in the area of Salto de Agua, where they caused dozens of casualties and about 70 combatants to surrender. De León concluded: 'Our bombs gave the right effect to the rebels and they will remember them and us.'

After these successes, de León's unit was ordered to Villahermosa Veracruz, where he was to support units commanded by *General* Celestino Gasca. Together with Roberto Fierro, Gustavo de León is known to have been promoted in rank for his excellent service and merits, on 21 June 1924.

Table 11: Known Sorties by *Mayor* Gustavo de León, MAS, early June 1924

North Front (Chihuahua Campaign Airfield)

Date	Airplane	Mission	Time
2 June	Salmson	Armed reconnaissance flight, Parral	03:50
3 June	Salmson	Armed reconnaissance flight, Santa Barbara	04:00
4 June	Salmson	Armed reconnaissance flight, Camargo	03:55
5 June	Salmson	Armed reconnaissance flight, Sta. Gertrudis	03:55
7 June	Salmson	Armed reconnaissance flight, Villa Ahumada	03:50
13 June	Salmson	Armed reconnaissance flight, Guerrero	04:00
14 June	Salmson	Armed reconnaissance flight, Yeponera	03:45
16 June	Salmson	Armed reconnaissance flight, Namiquipia	03:30
22 June	Salmson	Armed reconnaissance flight, Cuevitas	03:40
23 June	Salmson	Armed reconnaissance flight, Carrizal	03:50
24 June	Salmson	Armed reconnaissance flight, San Ambrosio	03:04
25 June	Salmson	Armed reconnaissance flight, S. Juan Dios	03:55
27 June	Salmson	Armed reconnaissance flight, La Morita	03:44
28 June	Salmson	Armed reconnaissance flight, Santa Barbara	03:50
5 July	Salmson	Armed reconnaissance flight, Escalon	03:45
9 July	Salmson	Armed reconnaissance flight, Villa Coronado	03:40
14 July	Salmson	Armed reconnaissance flight, Belleza	03:24
15 July	Salmson	Armed reconnaissance flight, Guadalupe	03:55
17 July	Salmson	Armed reconnaissance flight, Villa Allende	03:55
19 July	Salmson	Armed reconnaissance flight, Los Lamentos	03:30
22 July	Salmson	Armed reconnaissance flight, Belleza	03:45

Federal pilot Gustavo G. León, who left behind a written account of his experiences from the De la Huerta Rebellion. (Manuel Reyna-Garza Collection)

> they observed the gunship *Zaragoza* heading out to the sea in the direction of Frontera. Dropped some bombs and fired their machine guns at two other ships the traitors had in the river. Our aircraft was fired upon by the rebels…

With all attacked ships lacking armour they proved vulnerable to the machine gun fire from the DH.4Bs: thus, this air strike not only caused material damage, but affected the morale of rebel crews.

By 18 April 1924, Sidar's *Escuadrilla* was redeployed to the state of Durango, where it continued pursuing *General* Marcial Cavazos' forces. It is from this period that reports were saved indicating that its operated three DH.4Bs, marked as Nos. 1, 5, and 10. A day later, and this time on order of O'Neill, the *escuadrilla* was reinforced by an additional aircraft, but then split into two and partially redeployed to the state of Hidalgo, from where DH.4B No. 5 with Juan Gutiérrez and gunner Luis Verdeja, and DH.4B No. 13 with Pablo L Sidar and gunner Aldasoro operated.

Demonstrating the levels of proficiency the MAS had meanwhile reached, the two aircraft and their crews played a key role in tracking down and killing *General* Marcial Gavazos at the Hacienda de Los Pozoles, later the same evening.

Unsurprisingly, on 21 April 1924, this flight was redeployed again, this time to Pachuca, and was now included DH.4B No.1 with Gustavo G. León and gunner Ricardo Jiménez, DH.4B No. 5 with Juan Gutiérrez and gunner Luis Verdeja, and DH.4B No. 13; with Roberto Fierro and gunner Reyes Tellez (a local forest ranger).

Elsewhere, Montero's flight was ordered to support the advance on Ixtapa. Accompanied by Fritz Bieler, on 23 April, the Mexican pilot led an attack on the main square of this town: his bombs hit their target but failed to detonate, while Bieler misidentified his target and attacked Federal positions instead. Despite this failure, the rebel garrison of Ixtapa was quickly overpowered and on 28 April the *escuadrilla* redeployed there. From this airfield, the unit flew several reconnaissance flights to San Cristobal de la Casas Chiapas. During one of these, Bieler – accompanied by *Coronel* Pedro Moctezuna as gunner and observer – received ground fire, but registered the location from which it came, and then went on to bomb the headquarters. His weapons missed their target but hit the home of the local rebel chief: although causing relatively little damage, this attack was enough for the local population to press the rebels to leave the town.

With the rebels out of Ixtapa, the Federal forces quickly moved in and constructed an airfield near the local cemetery. Fritz Bieler and Rafael Montero deployed their DH.4Bs there on 1 May, followed by Sidar – in the DH.4B No. 6 – nine days later. By 27 May 1924, the *escuadrilla* was already operating from another new airfield, in Tuxtla Gutiérrez, where it was reinforced by a single TNCA Series B Salmson piloted by Bieler. During the entire month of May 1924, the flight suffered only one accident, when the aircraft piloted by Roberto Fierro with Adán Gálvez Pérez as gunner, was on a transfer flight from Minatitlan Veracruz to Villahermosa (Tabasco). The engine exploded, causing a sudden dive followed by a crash, but, miraculously, the crew emerged out of the wreckage with minimal injuries. After walking for a considerable distance, Fierro and Galvan Pérez were picked up by Federal troops that initially suspected them of being rebels.

The final fighting of De la Huerta's rebellion took place in June 1924, by when the activity of MAS aviators was limited to reconnaissance. During one such sortie on first of the month, Sidar's DH.4B suffered an engine failure, forcing him to land in the Lomoltai area. The pilot and his passenger, *General* Izquierdo, survived an emergency landing in the field without any injuries.

On 19 June, the Secretary of War and Navy ordered *Capitán* Castrejón to reinforce Sidar's flight, and a day later the Federal commander Bravo reported the presence of about 1,000 armed men under the command of rebel *General* Candido Aguilar in the Pinola area. Trying to check this report, Sidar took off for a reconnaissance of this area, but flew straight into a thunderstorm which forced him to return to San Cristobal de las Casas. Underway there, his engine failed and the flight commander was forced to make an emergency landing in a field outside Pinola within the rebel-controlled area. Nevertheless, Sidar and his gunner managed to walk all the way to San Cristobal de las Casas.

Meanwhile, all the attention of both sides focused on the area of Chictic Lake, where rebel forces under Candido Aguilar were withdrawing towards the border to Guatemala. Once again, it was up to the pilots of Sidar's *Escuadrilla* to initiate pursuit: he, Bieler, and Montero are known to have flown multiple sorties of strafing and bombing the enemy – mostly with DH.4B No. 6 (Sidar), and the TNCA Serie B Salmson (Bieler). By the time, De la Huerta was already out of the country, together with his closest followers, and disinterested in reigniting an uprising against Obregón and Calles. The disunity within the ranks of the remaining rebels reached such proportions that it caused infighting between them, effectively paralysing the entire movement: the De la Huerta Rebellion was over.

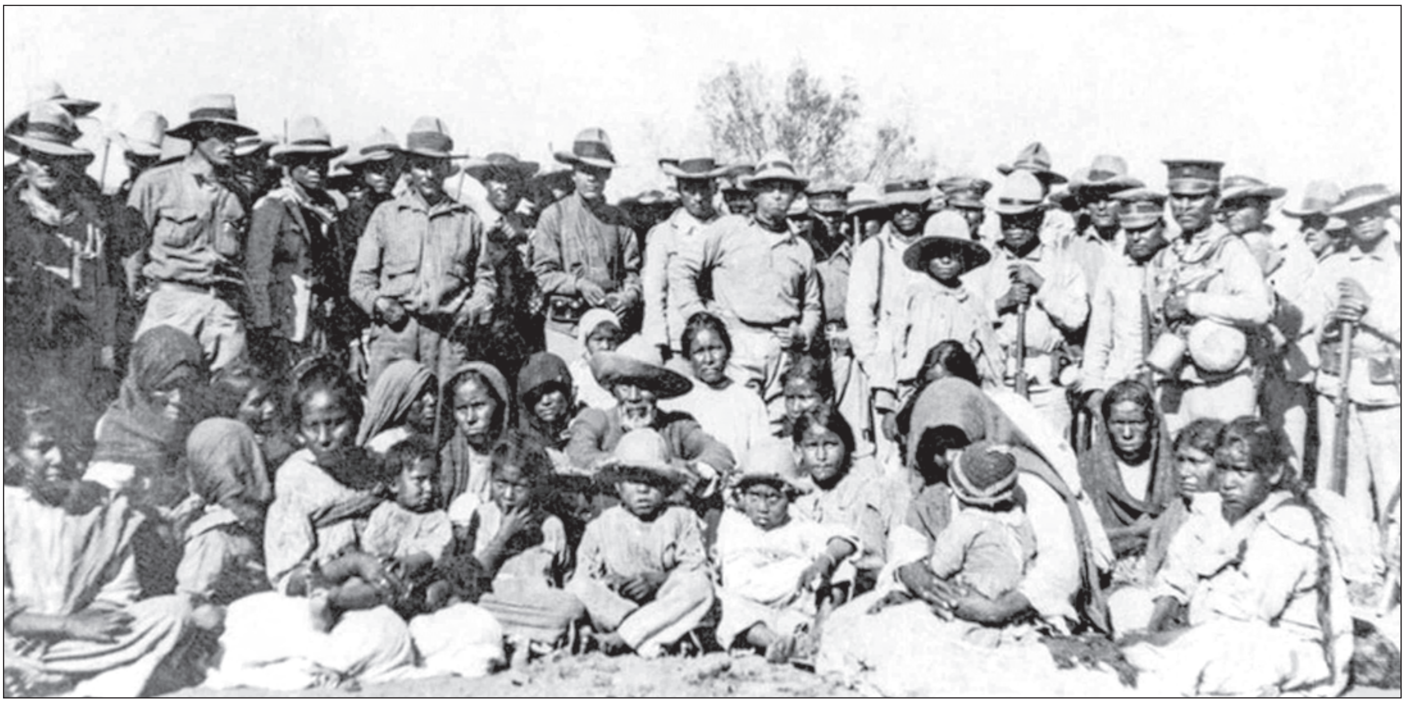
4

THE YAQUI INDIAN UPRISING OF 1926–1927

The Yaqui Indians lived as nomads and hunters up to 1533, when they had their first encounters with Spanish colonists in what is now the Mexican Federal State of Sonora. In 1607, the Spanish launched an attempt to conquer them, but were defeated, despite trickery. Henceforth, the Yaquis knew the Spaniards as the *Yori*: those that do not respect the traditional laws. In 1610, the Yaquis accepted peace with the Spanish Crown and over the following seven years the majority were evangelised by the Jesuits, who also changed their way of life from that of nomads to settlers in what eventually became north-western Mexico and the south-western USA. The Spanish taught them about cattle raising, cultivating wheat and vegetables, and to dedicate three days a week to maintaining their mission, and one to observe Christian services and devotions. After the expulsion of the Jesuits from all the Spanish colonial possessions in 1767, the new authorities attempted to subject the Yaquis to forced labour, or to take away their land – in turn causing continuous problems, including armed uprisings, that continued relentlessly well after Mexican independence.

In 1897, a new peace treaty was signed between Mexico City and the Yaqui tribes, but this was violated quite soon after, when the Federal government announced its intention to colonise the Yaqui and Mayo-inhabited land in the Yaqui Valley. The Yaquis took up arms and defended both their land and their autonomy. The conflict culminated in the Battle of Mazocoba, in 1900, when the Federal Army defeated the *Indios* and killed about 397 and took about between 300–1,000 men, women, and children as prisoners (depending on the source). This defeat was far from complete: not only did local armed resistance persist, but when the Mexicans loaded the captives onto a merchant ship, several Yaqui men resisted the deportation: although their hands were tied, they threw

A Yaqui battalion of the Northwest Army under the command of *General* Álvaro Obregón, in the 1913–1920 period. (Manuel Reyna-Garza Collection)



A group of Yaqui old men, women, and children captured by Federal forces during the campaign of 1926. (*Historia Grafica de la Revolucion Mexicana, 1900-1970*)

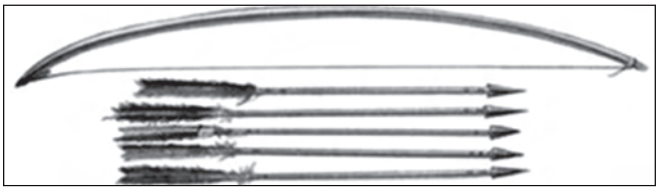
Yaqui Oath

For you there will be no more sun,
For you there will be no death,
There will be no pain for you,
For you there will be no heat,
Neither thirst, nor hunger, nor rain,
No air, no diseases,
No family.

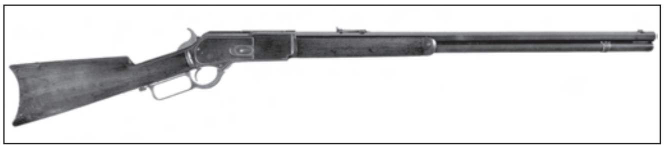
Nothing can scare you,
It is all over for you,
Except for one thing,
The fulfilment of duty,
In the position, that you are.
Designate, there you will stay.
For the defence of your nation.
Of your position, of your race,
Of your customs,
Of your religion,

Do you swear to fulfil the divine Command?

EHUI! (Yes!)



An Indian bow, and arrows with stone points. (Manuel Reyna-Garza Collection)



Winchester Model 1876 .30 carbine, the primary weapon of mounted Yaqui Indians. (Manuel Reyna-Garza Collection)

themselves into the water, preferring to drown instead of living as slaves away from their ancestral lands.

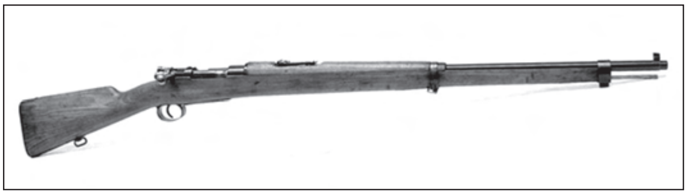
During the Mexican Revolution of 1910–1920, Yaquis were highly appreciated for their fighting skills, notable physical and mental strength, and the capability to adapt to any terrain. The revolutionaries thus did their best – including offering promises of land and liberties – to have them join their side. Initially armed with bows and arrows only, the Yaquis gradually captured enough rifles and ammunition to completely re-arm the mass of their combatants, and – especially during the Battle of Celaya of 1915 (in which Obregón defeated Pancho Villa and lost his right arm) – won fame as extremely brave, outright fierce combatants, and excellent sharpshooters. Indeed, one of them is credited with the first downing ever of an aircraft in combat in Mexico. Tragically, all the promises to the Yaquis were forgotten before long, and many Yaquis abandoned the revolution to return to working their land before the fighting was over.

Over the following years, several Yaquis were sent to Spain and served with its army during the Rif War in north-western Africa between 1920–1929. As in Mexico, they earned themselves a fierce reputation and, while their Mexican officers mostly returned home, the surviving Yaquis remained in place and assimilated into the population.[1]

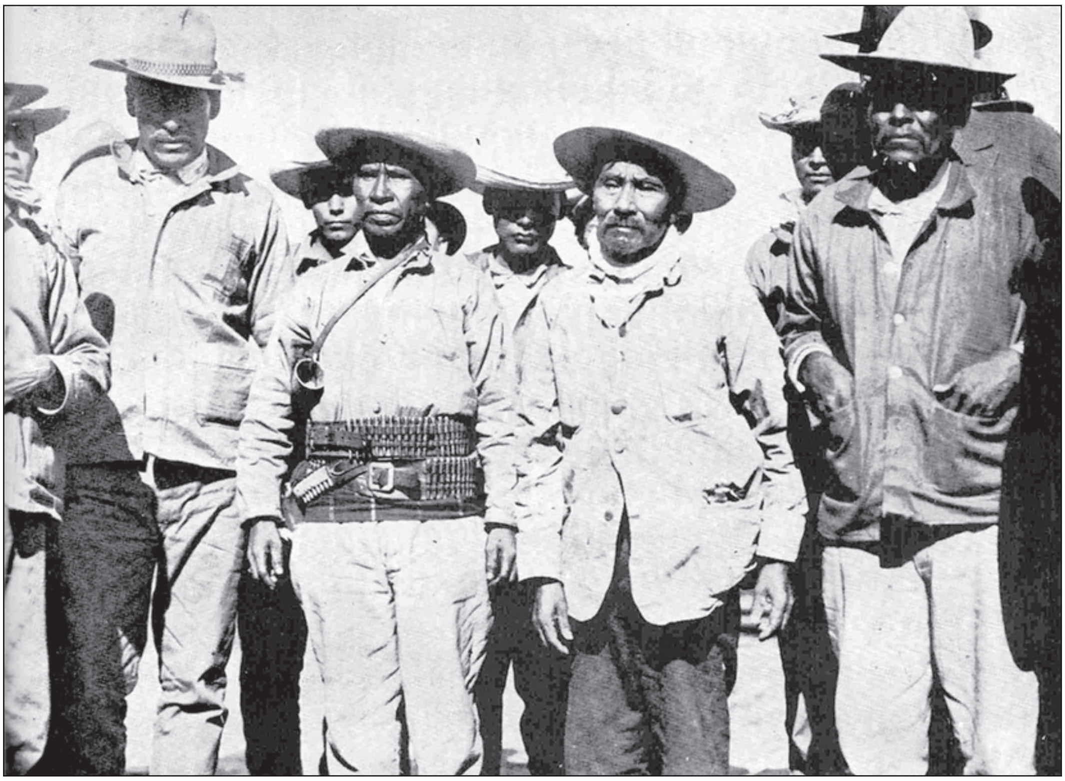
Three Versions of The Incident at Vicam

The 'last' revolt by the Yaqui Indians was caused by what became known as the '(Train) Incident at Vicam'. According to the official version of affairs, published by the Mexican government, on 12 September 1926, a train carrying *General* Álvaro Obregón Salido – according to accounts published in various newspapers: escorted by 150 troops commanded by *General de Brigada* Benito Bernal Miranda – underway from Guayama (Sinaloa) to Cajeme Sonora was stopped by a group of armed Yaqui Indians after arriving at Vicam train station, between of Pitamaya and Lancho. A delegation of Yaqui tribal chiefs then arrived at the armoured car to meet the ex-president and inform him that *General* Luis Matus wanted to see him. The reason for the Yaqui attempt to arrange a meeting between Obregón and Matus was that a group of 50 of their men commanded by Juan Rivera, had been arrested by the Army units commanded by *General* Francisco Manzo, military commander of Sonora, detained in Hermosillo, and were about to be deported by train to Empalme. Obregón refused to talk and remained on the train: instead, he contacted Governor Alejo Bay, and requested that he contact Manzo and secure the release of Riviera's men, and informed him about his detention.[2]

According to the Yaqui version, during the following night, Riviera and his men managed to escape. Early on the following morning, a military train commanded by *General* Francisco Manzo, armed with 28 machine guns and carrying 700 troops emerged out of the fog and stopped next to Obregón's train at Vicam station: before the Yaquis could react, the troops opened fire, killed dozens and scattered the others, thus 'saving' Obregón.



A 7mm Mauser Model 1910, made locally and deployed by the Mexican Army. (Manuel Reyna-Garza Collection)



The Yaqui leader *General* Mori, and his staff after surrendering to Federal forces, and being brought to Mexico City. (*Historia Grafica de la revolucion Mexicana, 1900-1970*)

The third version of these events was delivered by two Americans – Bill Barker and Carl Chalk, both of whom worked for the railway – and several contemporary press reports. According to them, on 14 September 1926 Obregón was returning from a business trip to Los Angeles and San Francisco, and – together with a group of associates – underway to his hometown of Cajeme Sonora. In addition to Obregón, the US superintendent A. D. Handly of *Sud Pacifico de Mexico* (a subsidiary of the Southern Pacific Railroad) was travelling with on the same train. The train was stopped somewhere between Pitamaya and Lancho and boarded by armed Yaquis, who demanded that the ex-president fulfil his promise and make several payments to the town of Vicam. After a short stop, the train was moved to Vicam station, and then stopped again and surrounded by about 2,500 armed Yaquis commanded by *General* Matus. He confronted Obregón, telling him about the grievances of his people and accused him of not keeping his word. That said, according to such accounts, there was no fighting – neither on the same day the train was stopped, nor on the following morning. Actually, the military train sent by Manzo to rescue Obregón was carrying not only Rivera and his men, but also the promised money. Sadly, the train slipped off the railway, with some of the wagons crashing and killing two (though after Rivera and his men had gotten off). Thus, it never arrived in Vicam. Meanwhile, the Yaquis had released Obregón after a few hours, without any harm, and he had continued his trip in a car. Finally, Barker and Chalk were led away to the safety of the Yaqui headquarters in the town. The following night, the Indians evacuated Vicam and thus when another military train arrived – one carrying a relief force of several hundred troops – early the next morning, the town was empty: all the Americans heard were a few scattered shots. Accordingly, it was only once the relief train attempted to reach the next station that it ran into a group of Yaquis busy setting two wooden railway bridges on fire (one destroyed and the other damaged but repairable) and cutting all telephone and telegraph wires in the area. The troops opened fire, killing one of the Indians, while the others fled.[3]

The first bridge was quickly repaired and the train continued its trip, when – according to other sources – another incident occurred: either one of the machine gunners saw several Yaquis climbing to the engine and opened fire at them, or the train ran over a small explosive charge placed on the track to warn the engine driver about the torched bridge ahead of him.[4] One way or the other, some of the troops on board the train thought the shooting or the small

One of many trains derailed by the Yaquis: this one was attacked near Vicam station, in Sonora. (*Historia Grafica de la Revolucion Mexicana, 1900-1970*)

detonation were signs of an attack on the train and opened fire. Whatever happened, after this incident Obregón vowed revenge.

War of Extermination

Weather because of misunderstandings or lack of communication, the Yaquis mistrusted both Obregón and the Federal government to a degree where they did not wait for their reaction. On the same evening that they had stopped the train carrying Obregón, and let him go, they evacuated all their women, children, and elders from Vicam to the Sierra Bacete mountains, while around 5,000 men under arms first dispersed, before concentrating in various positions, and thus the Army troops arriving on the next day found the town completely empty.

As expected by the Indians, the Federal Army was quick in mobilising around 4,000 troops and sending them to Vicam, Ortiz, Lencho, Cruz de Piedra and Mapoli, while a force of 3,000 commanded by *General* Manzo entered the Yaqui Valley with the task of literally 'exterminating the Yagui.' Additional reinforcements were to follow, because the Secretary of War and Navy mobilised troops in Mexico City, Guadalajara, and Chihuahua, aiming to dispatch to Sonora a total of eight infantry battalions, three cavalry regiments, several artillery batteries, and a single squadron of the MAS. That said, the deployment of the reinforcements was severely delayed because of a thunderstorm that destroyed a crucial railway bridge outside Ocotlán: the troops thus had to march for dozens of kilometres. With the march being carried out without any kind of logistic support or firm command from above, their columns became strung out along the roads, arrived piecemeal and in total disorder. Unsurprisingly, the Yaquis – led by *Generals* Luis Matus, Sochemea, Ignacio Mori, and Lusi Espinosa – began setting up ambushes. For example, sometime in the second half of September 1926, they ambushed an infantry battalion at a place named Cruz de Piedra, about 77 kilometres outside Vicam, and decimated it.

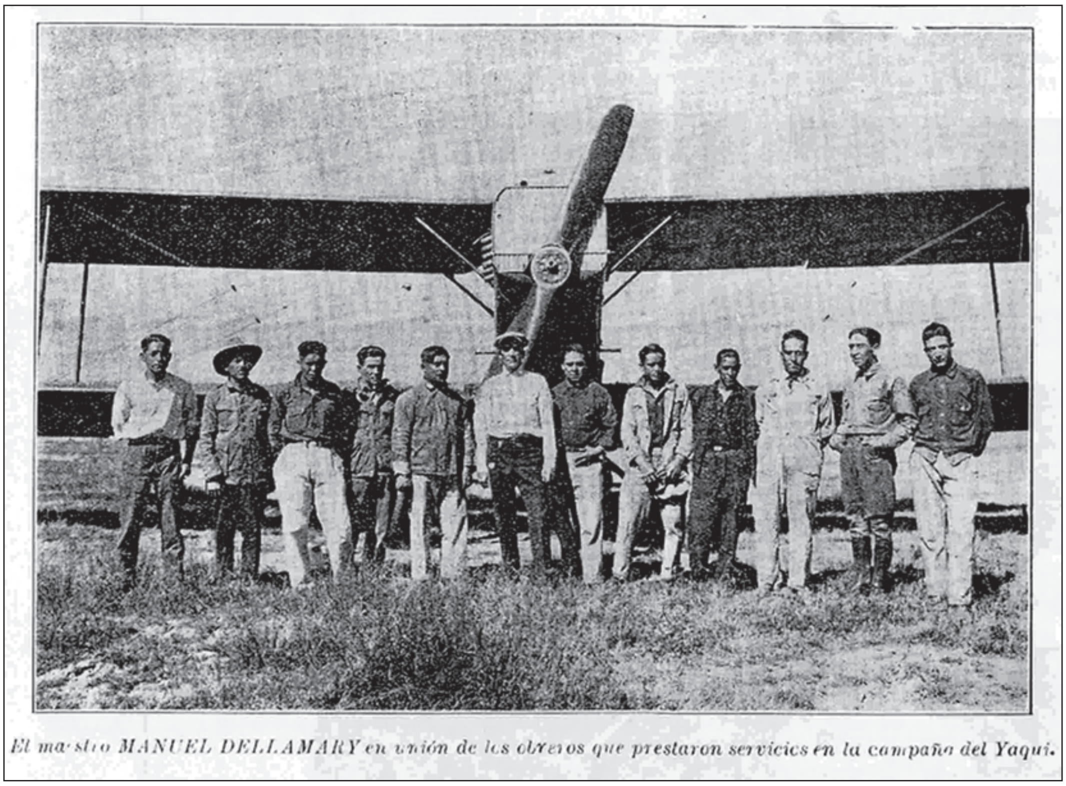
Together with concerns about the possible return of the former rebel leader Adolfo de la Huerta, this created an impression amongst the rank and file of Mexico City that there was a need to 'save Obregón'. In reaction, *General* Alamillo Flores – already a proponent of the idea of creating a Command and Staff School of the Mexican Army – scrambled to set up a team of staff officers to run the campaign. Supported by the government's decision to approve 1 million Mexican Pesos to finance the operation, *General* Joaquín Amaro, Secretary of War and Navy, appointed *General* Francisco R. Manzo as his Chief of Staff, in charge of *Generals* Antonio Ríos Zertuche, Lucas González, Pablo E Macias (future Minister of War and Navy), Agustín Olachea Avilés (future Secretary of National Defence), Teodoro Escalona, and Heliodoro Charis, and was able to count on Obregón and Amaro as advisors. Furthermore, Amaro arranged with the USA to permit the transit of Mexican Army troops and their military equipment via US territory.

Department of Aviation as of 1926

Experience from the campaign against the De la Huerta Rebellion resulted in profound changes in Mexican military doctrine. The capability of the MAS to fly reconnaissance, to bomb and strafe enemy forces, and *General* Ralph O'Neill's administrative skills, proved a true 'ace up the sleeve' for Obregón and Calle, and their armed forces, and resulted in the conversion of the MAS into an effective fighting force. Mexican military pilots were now equipped with powerful combat aircraft and in possession of extensive combat experience.

Since 1 November 1925, the commander of the Military Aviation Service was *General de Brigada* Miguel S. Gonzalez Cadena. On 11 October 1926, he was replaced by *General de Brigada* José Luis

A group of Federal pilots with one of the Douglas O-2Cs and an Avro Anahuac 80-A, during a pause in operations against the Yaqui Indians. (Ing. Enrique Velasco Collection)



El maestro MANUEL DELLAMARY en unión de los obreros que prestaron servicios en la campaña del Yaqui.

A group of mechanics under Manuel Dellamary, together with one of the Douglas O-2Cs, after returning from the Yaqui Campaign to Balbuena airfield. (*Revista Aerea*)

Amezcua Figueroa, but the service was now in a very good condition. In January 1926, its flying component consisted of three squadrons, all fully equipped and including complete command staff, while 11 new pilots graduated. In July 1926, the Aviation School was temporarily closed for reorganisation but its 19 cadets were redeployed to Balbuena Airfield, to continue their training (all undertaken on locally-manufactured versions of the Avro 504, named the *Anahuac*). The reason was that the entire service was in the process of a major expansion, aiming to result in the establishment of four attack squadrons with seven combat aircraft each (and three aircraft in reserve), and four additional squadrons for other purposes. These eight units were to be equipped with a total of 62 aircraft. Six other units were to be equipped with a total of 46 bombers and transports, for a grand total of 108 aircraft. The budget for this expansion was set at 20 million Mexican Pesos (or about US$10 million), and stipulated expansion of all the available major airfields, construction of new hangars and other facilities.

Of particular importance for this project was the acquisition of transport aircraft capable of rapidly deploying combat troops – which was of crucial importance for tackling of any kind of insurrection. For this purpose, the Mexicans aimed to purchase either some Ford-Fokker models, or four-engined alternatives from Germany or Great Britain, by 1928.

Finally, during the campaign against the Yaquis, sometime between December 1926 and January 1927, an additional unit is known to have been established using eight newly-acquired Douglas O-2C biplane observation and attack aircraft (construction numbers 358 to 365). Because no other official records other than fragments of two pilot log-books are available (those of *Mayor* Fierro and *Capitán* Luis Farell), little is known about the early times of this asset but that its aircraft were marked as No. 1, No. 2, No. 3, and No. 4, and might have been flown all the way from Santa Moncia in California, to La Misa, in Sonora, by a team led by *Coronel* Samuel Rojas, sometime in December. The first registered flight was undertaken by *Mayor* Roberto Fierro in aircraft No. 3, who flew from Misa to Ortiz on 28 December 1928. On 9 January 1927, Fierro flew the aircraft designated No. 4 for a practice sortie of 20 minutes from La Misa. Subsequently, O-2Cs deployed in Sonora were referred to by their nicknames: *Yaqui*, *Mayo*, *Pima*, and *Puma*. The other four aircraft seem to have ended up in Mexico City.

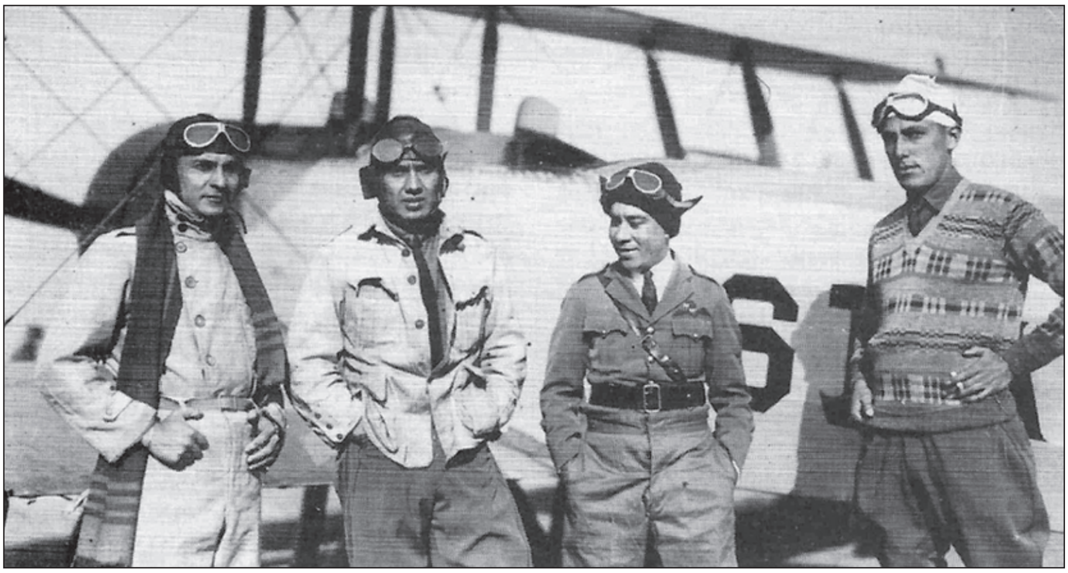
Table 12: MAS Aircraft as of September 1926

Type	Estimated number
Dayton Wright DH.4B	2
Farman F.50Bn2	1
Avro 504K and TNCA Anahuac	34
Morane-Saulnier MS.35 Parasol	2
Lincoln Standard L.S.	2
Curtiss JN-4 Jenny	1
TNCA Serie B Puros (rebuilds)	2

Mayor Fierro's Trip to Sonora

Perhaps the most important MAS pilot involved in the campaign against the Yaquis was Roberto Fierro. He left the following written account of his unit's deployment to Sonora:

> Once again, we have left the capital for a campaign. On 20 September 1926, I embarked my de Havilland [DH.4B] and



Four Federal pilots that participated in the 1926 Yaqui Campaign in Sonora (from left to right): Alfonso Reyes, Carlos Cristiano, Juan Gutiérrez, and Emilio Carranza. (*Instituto Nacional de Antropología e Historia Fototeca Nacional*)

CAMPAÑA DEL YAQUI *
...iban pilotos veteranos y novatos...

Two future long-range fliers – *Mayor* Roberto Fierro (right, in uniform) and *Teniente* Emilio Carranza – during the Yaqui Campaign. (*Esta es mi Vida*)

> Avro's [TNCA Avro *Anahuac*] in the Port of Manzanillo to the ship *Montezuma*… Taking supplies and equipment, and a good number of bombs: these had to share the space with the equipment of an artillery unit…

Fierro later found out the that the skipper of the ship was a childhood friend from his hometown of Ciudad Guerrero (Chihuahua). Their voyage up north had its dangerous moments, even without contact with the enemy, as recounted by Fierro:

> The ship appeared like the ark of Noah, because an infantry battalion with its animals and a section of artillery with their horses and mules were onboard. Soldiers' women accompanied them, too. This often put everybody in danger: all the equipment was parked on the deck, which was full of crates with aircraft, bombs, artillery, and ammunition. Soldiers continuously lighted fires to cook their food there, and thus there was a constant threat of a single spark causing a major conflagration. We told them, we ordered them, and threatened them – but all in vain: the womenfolk continued to cook right next to boxes full of grenades. Until the day we left the ship, I could not stop wondering how come it did not blow up.

They arrived at the port of Yavaros on the Sonora coast, and for the next 72 hours everybody was involved in offloading the ship. One novice pilot, *Teniente* Emilio Carranza, did not even rest during that time: he was fully involved in helping to get the *escuadrilla* offloaded. After three days of work, on 30 September, the unit was bedded down in a hotel in Cajeme. At that point, Carranza disappeared, and was not seen during the assembly of the aircraft, and the construction of the airfield – which were carried out under the supervision of Obregón. They found Carranza, sound asleep on his bed with his clothes and boots on, understanding that the flier fell, dead tired, they took his clothes off and let him sleep. Fierro claimed that Carranza slept for about a couple of days.

Eventually, Fierro's unit – which became known as the *2/o. Escuadrilla a La Misa Sonora* – was getting its aircraft and airfield ready for operations. Its base was situated next to the local cemetery and close to a river. Some of his personnel were musically inclined: they played and sang by night, helping keep wild animals – especially wolves and wild dogs – away from the camp. One of the pilots in Fierro's unit was Farell, who became known as '*Ronco*'(*snoring*). He was an excellent shot and thus a good hunter, and whenever his duties took him from La Misa to Station Ortiz and back, he would bring a good number of rabbits to supplement the daily rations of the unit. In turn, because he always made sure all his personnel would get up at 04.00hrs in the morning (those that did not get up would get a bucket of cold water thrown over them), Fierro earned himself the nickname '*El Lechero*' (*Milkman*).

Mayor Gustavo G. León had the *1/o. Escuadrilla* with 11 pilots under his command and had the other operational DH.4B, and reportedly received the new Douglas O-2C. Fierro had one L.S. and six Avro *Anahuacs*. It is possible that some aircraft, like the DH.4B, were later transferred to Fierro's *Escuadrilla*.

Early on, the unit was occupied with reconnaissance to accustom itself to the local terrain. In the course of one such sortie, the engine of the DH.4B piloted by *Teniente* David Chagoya stopped just as he was in the process of passing over the nearest ridge. The pilot managed to glide the aircraft into a gentle landing in a small valley nearby. Fierro thus had to lead a group of troops to find Chagoya, and then flew the aircraft back to the base.

Early Action over Sonora

Initially during the campaign against the Yaquis, the Military Aviation Service was deployed to fly reconnaissance, locate the insurgents and then bomb and strafe them. Fierro's logbook listed his first sorties on 28 September, when he reconnoitred the Sierra of Bacatete in DH.4B No.5 and observed and attacked several rebel concentrations. He flew additional missions of armed reconnaissance on 3, 9, 12, and 14 October, all with the same aircraft, and all lasting 55 to 75 minutes, as listed in Table 13. Initial sorties were dedicated to reconnaissance along the railway connecting Cajeme and Empalme, and the roads on approaches to Vicam. One of Fierro's pilots at this stage of the campaign was Emilio Carranza, who recalled:

VUELOS CONSTANTES *
...trabajar con pico y pala, además de volar...

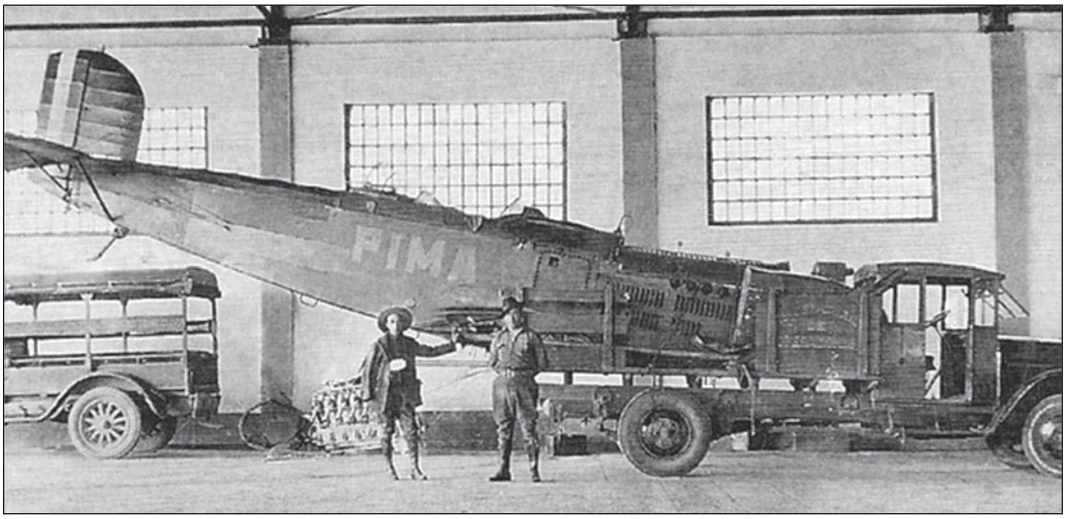
Mayor Fierro (centre) with fellow pilots Juan Gutiérrez (left) and David Chagoya, in front of an Avro *Anahuac*, during the Yaqui Campaign. (*Esta es mi Vida*)

Mayor Roberto Fierro Villalobos (centre, standing), with pilots of his *Escuadrilla* during the 1926 campaign against the Yaqui Indians in Sonora. (Ing. Adolfo Villasenor Collection)

> …I received a telegram from the command to immediately leave and join the 1st *Escuadrilla* [sic] under the command of *Mayor* Roberto Fierro, which was underway to Sonora because the Yaquis had revolted. During one of my missions, I had the luck to locate a Yaqui camp which I strafed and bombed, thus causing panic in which 200 Indians surrendered. The aircraft that I flew was the de Havilland No. 2. For three following months, I flew de Havillands for between five and six hours a day, until they purchased the Douglas aircraft, and *Mayor* Fierro assigned me the example No. 1, which I flew until the end of the campaign. During the operations against the Yaquis, I was rewarded with three mentions in dispatches, some personal, others collectively with other pilots.[5]

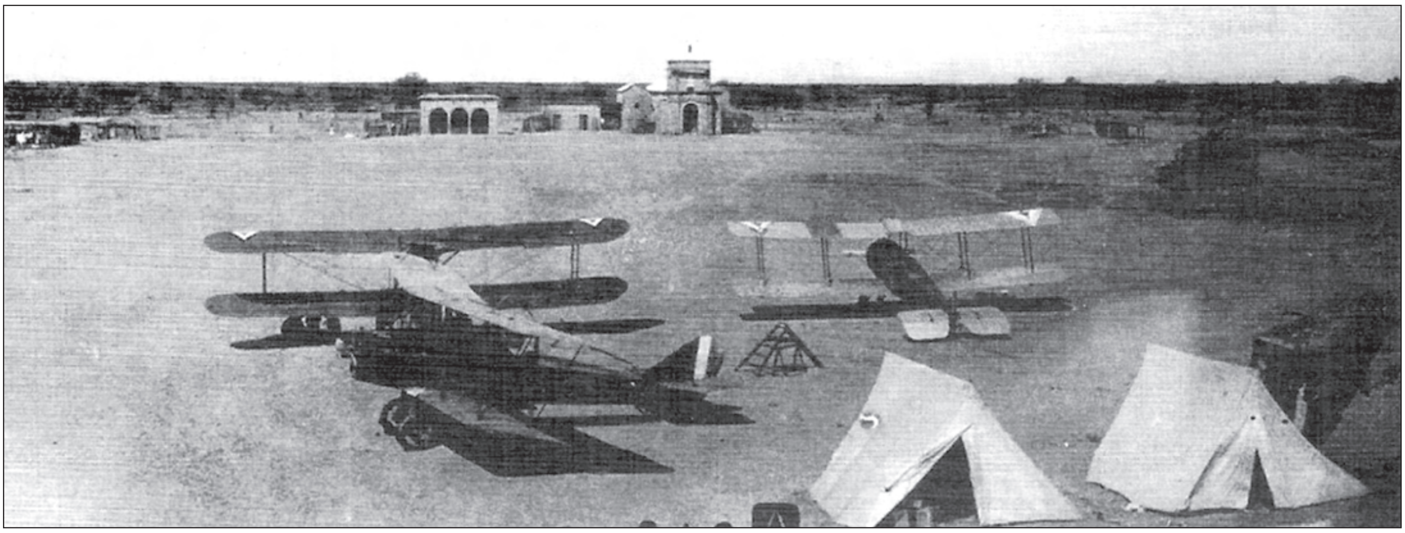
By 16 October, Fierro's *Escuadrilla* was at Empalme, from where its commander flew two air strikes on Bacalete, and by 22 October the unit was redeployed to a new airfield constructed outside De la Misa. From there, Fierro flew two air strikes with DH.4B No.2 on 28 October, both against the Yaquis in Bacalete. Other pilots of the squadron – whether Gustavo León of the other *escuadrilla* who was flying daily sorties over Suaqui and Aguacaliente, or Emilio Carranza, who is known to have bombed Torocopabampo – flew even more often.[6]

One task assigned to Fierro's *escuadrilla* in November 1926 was to locate and then attack a concentration of the Yaquis that had stolen cattle belonging to *General* Manzo's forces. This mission was assigned to *Capitán* Francisco Carrillo Torres, who flew with observer David Chagoya. About one and a half hours after taking off, the aircraft was still not back, and thus Fierro became concerned – even more so because meanwhile it was getting dark. Finally, at last light, they heard the aircraft approaching and scrambled to light the runway. Shortly before the DH.4B was about to touch down, somebody saw that a bomb had become stuck in the cables on the tail. This caused everybody to run away, although Torres accelerated away and decided to land in a nearby field. Luckily, Torres and Chagoya landed safely: indeed, it took *Teniente* Francisco Carrillo some time to disentangle the unexploded weapon from the cables before the aircraft could be returned to the airfield.



One of four Douglas O-2Cs operated by the MAS during the Yaqui Campaign, seen after returning to Balbuena Airfield following an accident. All four O-2Cs received names applied on the side of the centre fuselage: this one was named *PIMA*. (Hector Davila Cornejo Collection)

With such air strikes, *General* Amaro – and later *General* Manzo, who took over the command of the campaign from his headquarters in Ortiz – sought to buy time while deploying his infantry, cavalry, and artillery into



MAS aircraft seen at la Pitahaya Sonora airfield. Visible are an Avro Azcarate, a Douglas O-2C, and a Lincoln Standard J-1. (Manuel Ruiz Romero/Fidocomiso Calles-Torreblanca Collection)

Empalme
Son., Mex.
11-6-1926-

Even the few surviving Farman F.50Bn2s were used to transport personnel and supplies from Mexico City to Sonora. This photograph was taken at Empalme Sonora airfield on 11 June1926. (Ing. Enrique Velasco Collection)

starting positions. About a month after the Train Incident at Vicam, he had about 15,000 troops fighting the Yaquis in the Sierra de Bacalete. The Indians fought hard, and hit back in Tentahuac, Las Higueras, Canyon de las Virgenes, Station Ortiz, and repeatedly ambushed trains moving troops along the Southern Pacific line, between Corral and Tonichi. These actions put *General* Manzo under severe pressure, prompting him to order the MAS to conduct indiscriminate attacks on the Yaqui civilians in the mountains, using not only machine guns but even gas bombs, although there is no mention by the pilots of these gas bombs being used. Such practices were denounced by both Matus and De la Huerta, and the former went as far as to announce that any 'whites' caught by the Yaquis would be summarily executed, and their property destroyed, regardless of if Mexicans or foreigners.

Meanwhile, Manzo reorganised his troops into three columns, and launched an operation that was to become a prototype for similar counterinsurgency operations over the following hundred years. The two columns were ordered to manoeuvre, attack and drive the Yaquis: the first commanded by *General* Antonio Ríos Zertuche, with HQ in Pitahaya, and the second commanded by *General* Lucas Gonzalez Tijerina, with HQ in Agua Caliente.

Fierro's *escuadrilla* was assigned to the first column, commanded by *General* Zertuche, and was tasked with bombing the Yaquis in Bacatete and Bacatetito, thus forcing them to disperse and to head for Agua Caliente, Pilares, and Torocopobampo. A third column was waiting for them there, commanded by *General* Anselmo Armenta (with HQ in La Colorada).

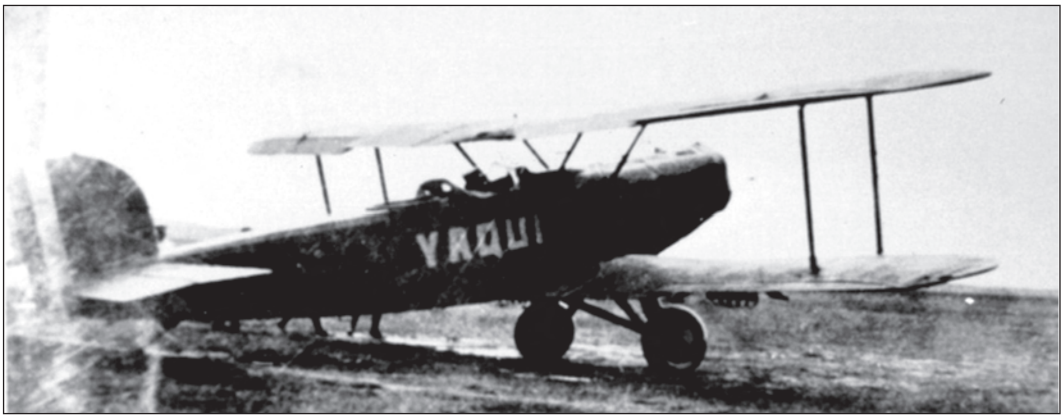
Working Up

The campaign against the Yaquis in 1926–1927 involved extensive use of radio communications: the Army set up three fixed stations, in Station Ortiz, Cajeme and Guayamas. Six portable sets were assigned to the three columns deployed in the field and used in conjunction with MAS aircraft. The combination of these assets enabled relatively quick reconnaissance and collection of good intelligence on the Yaquis and rapid reaction by combat aircraft. Unsurprisingly, about 100 air strikes – comprising both bombing and machine-gunning – were sufficient to drive the Yaquis out of their mountain strongholds into the open, where they were pursued by the Army.[7]

It is thanks to the deployment of these radio stations that an account by Bill Green – an electrical technician from the USA hired to help with setting up the radio stations – became available detailing the organisation and the process of working up of not only *Mayor* Fierro's *escuadrilla*, but the entire MAS contingent commanded by *Coronel* Samuel Rojas involved in the campaign. According to Green:

Table 13: Recorded Sorties by *Mayor* Roberto Fierro, MAS, early October 1926

Date	Aircraft	Mission	Time
28 September	de Havilland 5	Over enemy. Cajeme to Sierra Bachoco	1.25
30 September		Bombing and reconnaissance Sierra Bachoco	
3 October	de Havilland 2	Reconnaissance Cajeme to Empalme	0.55
3 October	de Havilland 2	Reconnaissance Empalme to Cajeme	0.55
6 October		Strafing Yaqui coastal zones	
9 October	de Havilland 2	Reconnaissance Rio Yaqui	1.10
12 October	de Havilland 5	Reconnaissance Vicam and Pitaya	0.45



The first four Douglas O-2Cs sent to Sonora to combat the Yaquis had names applied in large white or yellow letters on the sides of the centre fuselage. This one was named *YAQUI*. (Ing. Enrique Velasco Collection)

Troops of the 24th and 29th Infantry Battalions of the Mexican Army, advancing against the Yaqui in the Sierra La Gloria. (*Historia Grafica de la Revolucion Mexicana, 1900-1970*)

Early in 1927, we were constructing radio stations for the Mexican Army, three divisions of which – commanded by General Francisco R. Manzo – were hunting down Yaqui Indians in Sonora. Attached to the headquarters at Ortiz were several squadrons under Major Roberto Fierro, now commanding general of the Mexican Air Force, and Major Rojas, now a general. There were a lot of good guys among the pilots there, including one *Teniente* Emilio Carranza, who later was killed one stormy night on flight from New York, when he cracked up in New Jersey.

Anyway, Carranza and I were good friends, although I thought he was sort of a wild pilot, and I diligently side-stepped every offer he made to take me up. They had a squadron of brand-new Douglas bombers with 400-horse-power Liberty engines. These arrived in railroad box-cars and were put together in a cow pasture that we called the military airfield. Hangars and shops were constructed on poles and carrizo cane, with thatched roofs and all the markings, for a magnificent fire, but otherwise open to all the elements except the sun. The way the sun was, over there in the desert, something to worry about.

While they were putting together the Douglas bombers, I chanced one afternoon, and Carranza was warming up one of them. He insisted that I test hop it with him. All the mechanics and pilots gathered around me and it was impossible to refuse. This would be my introduction to airplanes. As they shoved me into the cockpit, Fierro reached up his hand and said, “Well, good bye Green!” The tone of his voice did not help my spirits at all. They offered to let me back out, especially since the ship was about to make its first test hop. But, with all the grinning mechanics around, it was not easy to back out, so my aviation career started off with a twenty-minute hop.

The airfield was a little hunk of desert we had smoothed out a bit. Located between two ridges of mountains. Immediately after the take-off, it was necessary to climb steeply to clear the ridges. The gusts over those little hills were really terrifying to a novice, and I did not think I would ever need another ride. The didoes that Carranza cut did not help either, or as the oil pressure gauge did not seem to show that the oil pump was working. I was spared what usually followed his preliminary warm-ups. Those old Douglas bombers were big airplanes, as airplanes went in those days. Four hundred horses in the nose! That was quite the stuff. They did not carry much in the way of bombs, but they had a couple of machine guns, and they certainly scared the Indians. Sometimes, they did every bit of 120 miles per hour.

Not the best of photographs of this kind but this interesting shot shows the gunner of the Douglas O-2C named *MAYO* with his two Lewis machine guns. (*Museo del Ejercito y FA Mexicanos*)

As mentioned above, both of the MAS units deployed for this campaign were under the overall command of *Coronel* Samuel Rojas: he was the first to bring with him parachutes purchased for the service. Once Fierro’s unit was worked up and ready, Rojas ran an inspection during which he wanted to personally demonstrate

Mexican Army troops deploying a 20mm cannon to attack Yaqui positions in the Canon de la Virgen area. (*Historia Grafica de la Revolucion Mexicana, 1900-1970*)

the use of parachutes – although without wanting to jump with one. He put on a parachute and positioned himself behind one of the O-2Cs, the engine of which was then run up by *Mayor* León. The air stream caused by the propeller then opened the parachute, but then León – who did not get on well with Rojas – started moving his aircraft, dragging the superior officer over 150 metres of rough terrain, rocks and several cactus plants. Rather unsurprisingly, Rojas ended up being badly beaten up and bruised: he could not walk nor sleep at night for about 10 days. Nevertheless, instead of causing problems to León, he took the incident in his stride and laughed about it.

First Success

On 28 January 1927, Fierro's *escuadrilla* was redeployed to Pitabaya. The unit transferred in formation and before landing there, all pilots took a good look at their new base. On noticing several intact homes nearby, they hoped to find decent living spaces. However, on landing and a close examination of the houses, they found them completely demolished by the retreating Yaquis. Used to the hardships, the pilots and ground personnel cleaned and repaired the housing, thus establishing for themselves decent accommodation. On the following morning, they helped unload all of their equipment and clear the runway. Thus, on 31 January 1927, Fierro was able to fly a reconnaissance mission with *General* Zertuche in the rear cockpit. They followed the railway to Mapoli, and then overflew the Yaqui base in Sierra de Bacatete, which they found abandoned. Delighted, Zertuche subsequently provided supplies for 15 days to the unit. Operations went on, of course, and over the next few days Fierro's *escuadrilla* continued flying armed reconnaissance, strafing and bombing whatever Yaqui columns they were able to find.

Table 14: Recorded Sorties by Fierro's *Escuadrilla*, January-April 1927

Date	Notes
14 January 1927	bombing of Yaqui camps in Huichori and Bacatetito
20 March 1927	bombing of Zamahuaca, Sonora
2 April 1927	bombing of camps at Balcob
16 April 1927	bombing of camps at Zahuara

The Scares

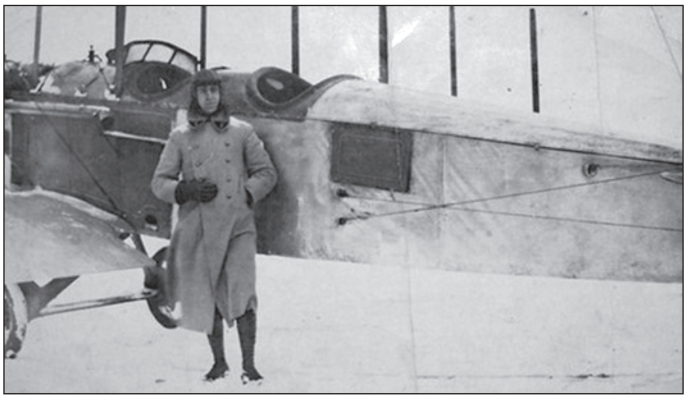
In addition to armed reconnaissance and air strikes, the Fierro's *escuadrilla* occasionally helped in medical evacuations. One such instance occurred in January 1927, when *General* Ramon Yucupicio Valenzuela suffered a stomach ailment and severe internal bleeding. Fierro volunteered to pick up the general from a dirt strip and then flew him to Port of Guaymas where he received proper medical care. After his recovery, Yucupicio Valenzuela personally thanked to Fierro and promised to find and provide him with an aircraft.

General Álvaro Obregón took command of troops in the Yaqui Campaign. He is seen here with a group of Army officers and MAS pilots in September 1926. (Cubillas Collection)

A *Soldadera* (female soldier companion) helping defend the Federal outpost from a Yaqui attack. (ElHectorObregón.com)

An Avro Anahuac seen during a reconnaissance mission over Yaqui-controlled territory. (*Historia Grafica de la Revolucion Mexicana, 1900-1970*)

Intensive operations could not remain without consequences, and the unit eventually found itself short on both spares and supplies. The situation reached a point where Fierro was left with no option but to travel to Mexico City to organise everything with the headquarters.



Pilot Luis Farell Cubillas, seen here in the Yaqui Campaign in Sonora during the winter 1926–1927, in front of a Lincoln Standard. (Familia Luis Farrell Collection)

While he was gone, Luis Farell took over as commander. Once Fierro was back, he was informed about a number of incidents. In one case, a pilot ordered by *General* Zertuche to fly reconnaissance of the sea in the Cortez area, returned to report a large fleet ready to launch an amphibious assault. Of course, Zertuche promptly dispatched his troops to the coast. However, once there, they realised that the pilot had misidentified local fishing boats as warships, thus causing a great scare.

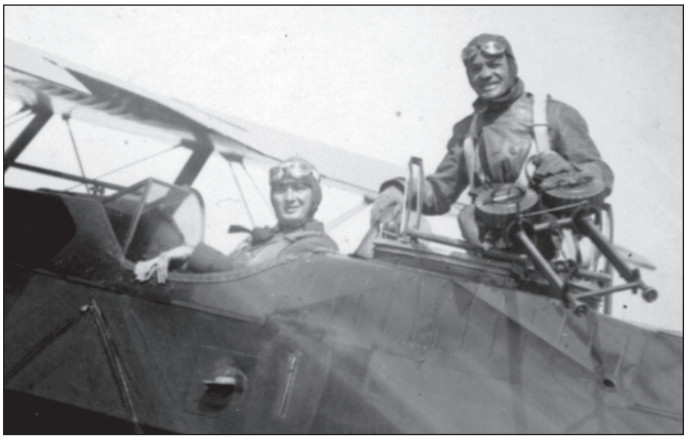
Another incident was of an entirely different nature. Several captured Yaquis were court martialled and sentenced to death by a firing squad. In an attempt to impress the pilots of the MAS, and to return them a favour for all they did for him, *General* Zertuche then ordered one of them to command the execution. Never thinking he might ever find himself in such a situation, the selected pilot proved unable to even stand in front of the general. Eventually, understanding his predicament, Zertuche relented and relieved him of the task.[8]

Losses

While avoiding any kind of damage or losses during its work-ups and early armed reconnaissance operations in support of Zertuche's column, Fierro's *escuadrilla* ran out of luck on 3 February 1927, when the DH.4B No. 2 piloted by *Teniente* Jesus Ulloa, with gunner/mechanic Eduardo C Vigil on board, was sent into a bombing mission. The related report stated:

> At 2 hours and 30 minutes in the afternoon of 3 February of this year 1927, de Havilland [No.] 2 of bombardment caught fire in flight when it was crewed by *Teniente* Ulloa with mechanic Eduardo C Vigil, who was about to graduate as a pilot. Ulloa and Vigil were flying over enemy territory, in the Sierra de Bacatete, when the fire occurred which brought the aircraft down, causing an explosion of bombs on the impact. *Mayor* Roberto Fierro Villalobos, the commander of the *Escuadrilla* which Ulloa was a member of, saw the aircraft failing to gain altitude while approaching hills, then turn and then going into a dive. He expressed his suspicion that the engine suffered overheating and thus stopped in the air.

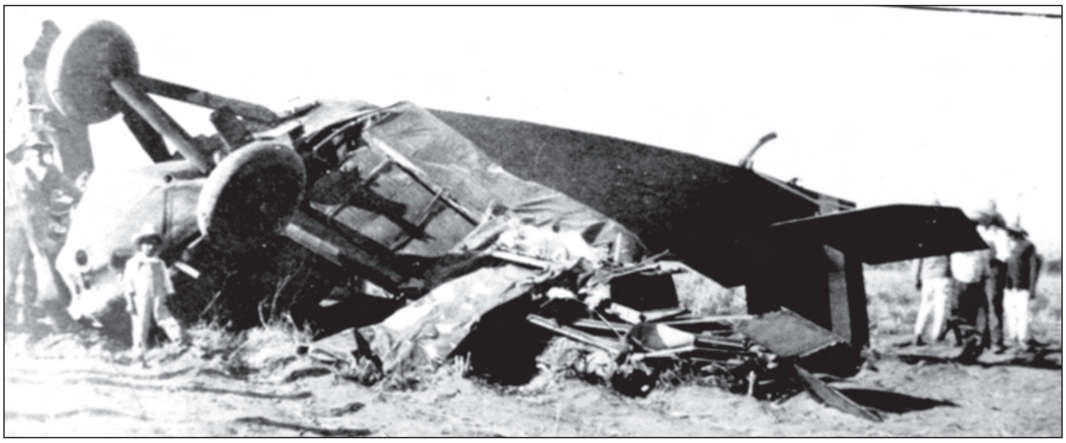
This photograph probably shows the crash site of the DH.4B Number 2, from 3 February 1927, in which the crew including *Teniente* Jesus Ulloa and mechanic Eduardo C. Virgil were killed. (*Historia Grafica de la revolucion Mexicana, 1900-1970*)



The crew of a Douglas O-2C about to take-off for an attack during the Yaqui Campaign. Notable is the twin Lewis machine gun for the observer/gunner. (Ing. Enrieque Velasco Collection)

The burned remains of the crew were recovered and brought back to Mexico City: Vigil was buried there, while Ulloa's family requested his remains to be shipped to his hometown of Morelia.

Another accident occurred when Fierro flew armed reconnaissance for Zertuche's column and then decided to land on a dirt runway quickly prepared by the Army and visit the general.



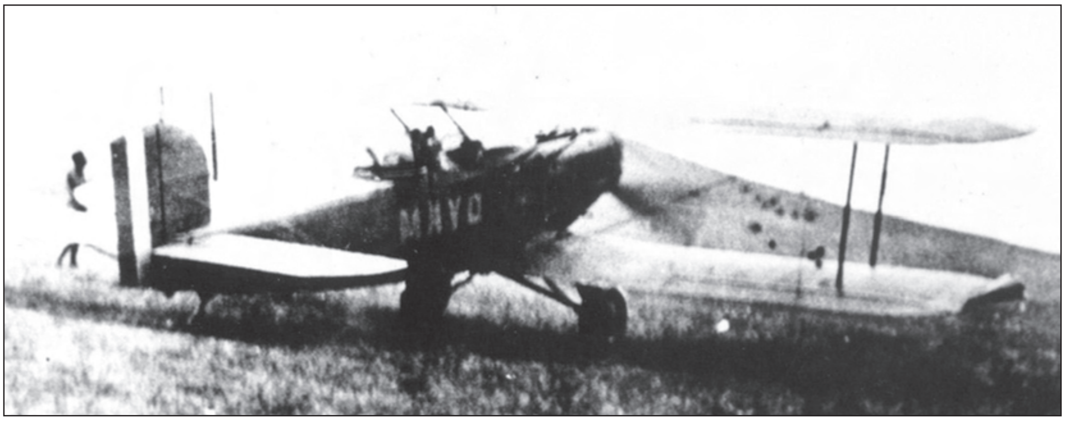
One of four Douglas O-2Cs was lost before the Indians surrendered – though without casualties amongst its crew. The aircraft was probably the example named *PUMA*, which is known to have not been returned to Mexico City. This photograph was taken at Silao Guanajuato, on 8 March 1927. (Ing. Enrique Velasco Collection)

After the meeting, the squadron commander decided to fly back to his unit, despite strong winds and Zertuche's attempts to convince him to stay overnight. Eventually, Fierro tried to take-off, but a gust of wind flipped his aircraft (of unknown type) towards the nearby troop camp, where he crashed into the weapons storage area, killing a soldier standing guard. Fierro ended up hanging in his straps, upside down, among a cache of rifles with bayonets, and it took long effort to get him out of the wreckage without any major injuries and he felt very badly about killing a soldier doing his duty.

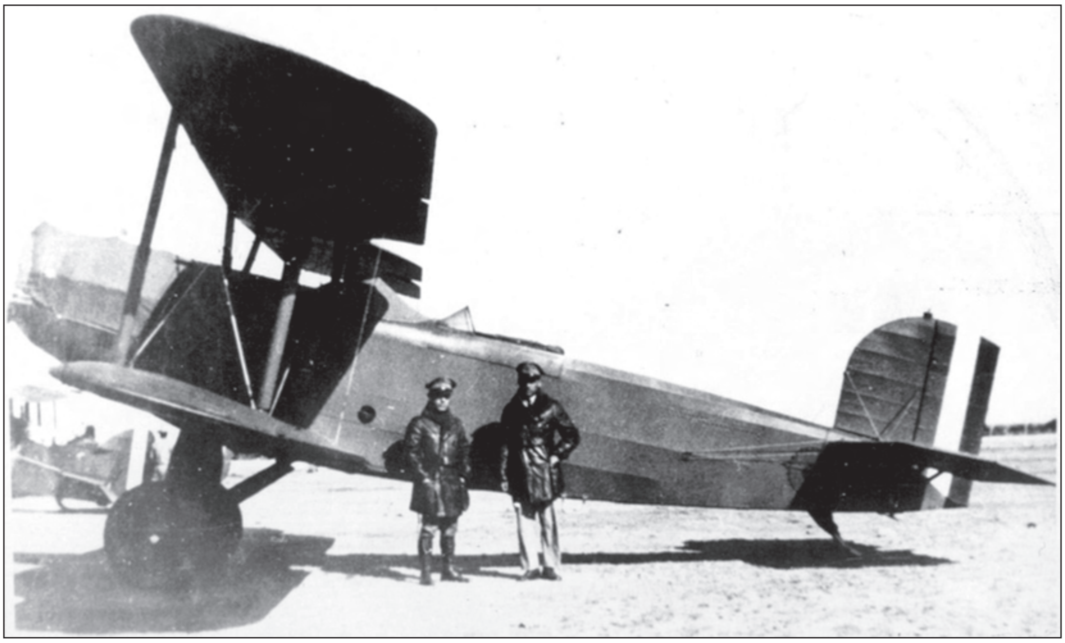
Perhaps as a replacement for these losses and compensation for Fierro's accident, his unit was reinforced through the assignment of *Teniente* Antonio Cárdenas Rodriguez. While a young pilot at the time, Cárdenas went on to serve under the Secretary of Communications and Public Works, years later, where he helped work up the country's first regular air mail route from Mexico City to the USA.

Another account of MAS operations of February–March 1927 was provided in November–December 1927, when the following was published in the aviation magazine *Revista Aerea*:

This unidentified Douglas O-2C came to grief after a landing accident. Most likely, it was repaired and returned to service. (*Historia Grafica de la Revolucion Mexicana, 1900-1970*)



Another of the first four O-2Cs, this time the example named *MAYO*. This aircraft survived the campaign. (Ing. Enrieque Velasco Collection)



A good side-view of a Douglas O-2C, which were deployed almost 'straight form the factory' during the Yaqui Campaign. Notably, no other markings except the national colours had been applied when this photograph was taken. (Ing. Enrique Velasco Collection)

> The operations against the Yaqui Indians continued during the month of February, with growing intensity. Naturally, the personnel of the air force carried out their activities. Every day, Douglas – the aircraft of preference – flew reconnaissance from Ortiz to Puerto Gallo, Agua Caliente, Centradita, Jupabamgo, Machomobampo, Pico Algodenesm, Dolores Cahui y Torocopobampo, Coyotes, and other locations. There was no place that was not observed in detail by the members of two *escuadrillas*.
>
> On 13 March, the pilot Chagoya found the enemy at a point in the place called El Canon, attacked them with machine guns and then informed *General* Ríos Zertuche. No rest was given to the Yaquis, because aircraft continued flying daily sorties from Station Ortiz, where the headquarters were situated, and

EL HALCON
82

An Avro Anahuac – which were primarily used for training, though also for ground attack – named *El Halcon* (*Hawk*). Its serial number was probably 82-A-189. (Ing. Enrique Velasco Collection)

Yaqui Soldier

While such operations as the campaign against the Yaquis of 1926–1927 would today be fiercely criticised as terror and displacement of the indigenous population, at the time the success of this enterprise was widely celebrated in Mexico and abroad. Unsurprisingly, several memorials to the heroes of the Army and the MAS came into being.

The best known was the statue titled *Al Defensor de la Patria* (Defender of the Fatherland), created by sculptor Ignacio Asunsolo Mason. It was erected on the Ejercito Nacional Avenue, near the headquarters of what subsequently became the Ministry of Defence. After standing there for 72 years, this was removed to an area of Chapultepe Park in 2017. But by 2020 more copies of *Al Defensor de la Patria* were located in different states of the country to honour the Mexican Army.

What is next to unknown is that the soldier that acted as the model for this sculpture was Victor Valenzuela Buitimea, a Yaqui Indian born in Rio Mayo de Huatabampo (Sonora) in 1885. Despite the injustice experienced by the mass of the Yaquis, many of them served with the Mexican Army before, during and after the campaign against their last uprising. Like most Mexican soldiers serving at the time, he never went to school and thus was illiterate. At the age of 34, he joined the 1st Battalion del Mayo, then switched to the 47th Infantry Battalion, and became a career soldier who distinguished himself on numerous occasions. Between 1912 and 1929, Valenzuela Buitimea participated in about 40 firefights and battles. His superiors judged him as having good conduct, being a serious person, faultless, very responsive and reliable. On 1 March 1916, he was promoted to the rank of Sergeant 2nd Class and continued serving as an infantryman with the 47th. In 1936, this unit was reorganised as the Presidential Guards (also known as the 28th Battalion), and Valenzuela Buitimea was appointed as the personal and family bodyguard of President Lázaro Cárdenas. As of April 1942, he still served as an aide in charge of the 12th Infantry Battalion. On 16 June 1942, he was promoted to the rank of *Teniente* and, a month later, awarded the Medals of Loyalty of the 5th, 4th, and 3rd class for 15, 20, and 25 years of service. Valenzuela Buitimea re-enlisted no fewer than 11 times. He left the Army only in June 1943, and went to work as a civilian in the Quartermaster Department of the Army. On 1 September 1945, he was transferred to the Service for Maintenance of Military Installations, where his trail ends: it remains unknown when and where he retired, or where and how he lived and passed away.

> constantly strafed their positions. Suspicious areas in El Bacatete, in Cerro Gaoo, in Bacetetito, in Centradita and any other were repeatedly attacked…

Final Battle

By April 1927, the surviving Yaquis were demoralised and forced to continue withdrawing, all the time harried by fighter-bombers of the MAS. Their last big concentration gave its last major battle at Cerro del Gallo, on the 27th of that month. A day later, the Los Angeles Times reported that '…Mexican troops captured 415 Yaquis, including 214 women and 175 children.'

Skirmishing with smaller and scattered groups went on for months afterwards and was regularly reported by the contemporary press. Several of these were fatal for the Army leadership. For example, on 30 April 1927, about 40km (25 miles) southwest of Nogales, a column of about 300 troops from the 4th Infantry Regiment ran into 400–500 Yaquis. In the ensuing firefight, 17 Indians and 25 soldiers were killed, and another 18 soldiers wounded. Among the dead were *General* Ancelmo Armenta (commander of the regiment) and *Mayor* Francisco Barrigueta. It was only on 2 October 1927 that *General* Manzo informed President Calles that he expected the Yaqui chieftain Matius – who was still holding out in the Bacatete

Mountains – to surrender. Meanwhile, the Army established well-fortified garrisons in all the Yaqui villages, and held the area in a tight grip, surrounded from four sides: the surviving Indian combatants were hungry and critically short on ammunition, and ever larger groups began to surrender, while others fled over the border to the USA. Ultimately, Matius gave up and surrendered at Vicam, followed by Ignacio Mori and 900 men, on 30 October 1927.[9]

By this time most of the MAS units had already withdrawn from Sonora. On 6 October 1927, three out of four available O-2Cs were transferred from Station Ortiz via Culiacan Sinaloa, and Guadalajara Jalisco back to Balbuena, where they arrived at 16.45hrs local time on 8 October. *Yaqui* carried *Mayor* Gustavo León and mechanic Esperandi, *Mayo* had *Capitán 1/o* Juan Gutiérrez and *Teniente* David Chagoya, and *Pima* had *Teniente*s Luis Boyer and Antonio Cárdenas Rodriguez.

The balance of Gustavo León's *escuadrilla* – including *Teniente*s Alonso Reyes and José León, with master mechanic Manuel Dellamary – followed by train, together with all the equipment and stocks of ammunition.

5

RYAN'S REVOLUTIONARY M-1S

In August 1926, and without the knowledge of anybody within Ryan Airlines, Inc. – a corporation owned and run by Tubal Claude Ryan and Benjamin Franklin Mahoney of San Diego, California – this US enterprise was about to be drawn into another of the many Mexican revolutionary plots. Ultimately, this affair could have resulted in Ryan and Mahoney's downfall due to the ruined finances of their company.

The plot in question was organised by *General de Division* Enrique Estrada Reynoso: an officer of the Mexican Army who held the post of Secretary of War and Navy from 1920 until 1921 and served as a commander in several positions afterwards before going to exile in the USA following the failure of the De la Huerta Rebellion of 1923–1924. In the USA, Estrada first settled down in San Diego, then in Los Angeles, before – with the help of several other exiles – starting to plot his coup, which was to include numerous other Mexican immigrants from California.

Cristeros

The Catholic Church and the state of Mexico had been at odds ever since the War of Reform in the nineteenth century, but especially since the Mexican Revolution. The Church and the Diaz government had reached an informal *modus vivendi* in which the state formally maintained the anti-clerical articles of the liberal Constitution of 1857 but did not enforce them. As the democratisation of the country developed during the following years, and especially after the ouster of De la Huerta in 1914, members of the National Catholic Party and high-ranking Church figures were accused of collaborating with the Huerta regime. The Catholic Church was subjected to widespread hostility and fierce anti-clericalism, especially by the revolutionaries. Indeed, the 1917 Constitution of Mexico included Article 130, which strengthened the anti-clerical provisions. However, preoccupied with other affairs, President Carranza and his successor Obregón proved lenient in enforcing related policies – especially in the areas where the Church remained powerful. On the contrary, President Plutarco Elías Calles was convinced that the Church was challenging his revolutionary initiatives and the legal basis. Therefore, he instituted additional anti-clerical laws, explicitly ordering the relevant authorities to act according to the Constitution. The Church hierarchy, prosperous farmers, and urban Catholic supporters gravitating around the National League for the Defence of Religious Liberty and the Mexican Association of the Catholic Youth (MACY), supported by Pope Pius XI in the Vatican, initiated efforts to have the 'offending' articles of the Constitution amended. Not only were the amendments rejected by the Mexican Congress, but the Calles government considered the Church's activism to be a threat and had many churches closed.

On 14 August 1926, government agents supported by the Army began purging churches in several cities, killing a number of priests, vicars and spiritual advisors in the process. Several ranchers led by Pedro Quintanar then seized the treasury in Chalchihuites (Zacatecas) and declared themselves in rebellion. In Guadalupe, when the Army approached the Church of Our Lady, about 400 Catholics shut themselves inside and opened fire. The resulting firefight carried on until the civilians ran out of ammunition and surrendered: by then, 18 had been killed and 40 wounded. The government continued its purge and on the next morning the Army stormed the parish church in Sahuayo (Michoacán), executing the priest and his vicar in the process. Such actions only caused a conflagration and by the end of September most of central Mexico was up in arms. On the 28th of that month, Luis Navarro Origel, mayor of Penjamo (Guanajuato) launched his uprising with help of two Apache tribes, the Chavez and Trujillos, which helped him obtain arms, ammunition and supplies from the USA. A day later, Trinidad Mora launched an uprising in Durango, and on 4 October, *General* Rodolfo Gallegos led the rebellion in Guanajuato. While most of these uprisings resulted in at least low-level insurgencies, because the Calles government failed to take the situation seriously some of the rebels brought large segments of the country under their control and established serious armed formations. This was not only the case with the ranchers of Zacatecas, but also for the MACY branch in Jalisco. Still, 'formally,' the rebellion – which became known as the *Cristiada* and its participants the *Cristeros* – began only on 1 January 1927, when René Capistrán Garza – leader of the Catholic Youth in Zacatecas – issued a manifesto 'To the Nation', in which he declared an 'hour of battle' and that the 'hour of victory belongs to God.' This sparked an uprising in the state of Jalisco, where rebels, although poorly armed and lacking supplies, brought numerous towns and villages under their control. To their aid came the Feminine Brigades of St. Joan of Arc, which raided towns and ranches, and ambushed trains to obtain money, horses, ammunition, and food. Further support came from many peasants who took up arms in the fight for agrarian land reform, once the focal point of the Mexican Revolution. Early on, the poorly armed rebels were easily defeated by the Army. However, gradually they improved their organisation and equipment until defeating Federal troops in the Battle of San Francisco del Rincón (Guanajuato), on 23

February 1927, and then at San Julián (Jalisco). It was only because of these setbacks that the Calles government realised the seriousness of the situation.

Estrada's Plot

With Calles' government facing two armed uprisings, Estrada decided to take advantage of the situation. He planned to enter Mexico via Mexicali, seize the town, then expand the territory under his control and establish his own government. For this purpose, he recruited a force of about 150, mostly Mexicans, but with a few American citizens too. Moreover, he took care to arm his troops well and for that purpose acquired 400 Springfield rifles, two Marlin machine guns, 100 pipe-fittings to make bombs, and 150,000 rounds of ammunition. To transport his force, Estrada acquired a total of six trucks from the Federal Knight Auto Truck Company, three of which were modified into armoured vehicles at a garage in Los Angeles through the installation of heavy armoured plating around their engine compartments, the cabins, and the flatbeds. These modifications caught the attention of informants of the US Department of Justice, which henceforth kept an eye on the vehicles and the Springfield rifles. In turn, Washington went a step further and informed Mexico City. From that moment onwards, the Calles government was at least aware that Estrada was plotting some kind of trouble.

General de Division Enrique Estrada Roque was living in exile in southern California while planning to cross the border and seize control of Baja California in Mexico. (Authors' collection)

Having learned the lesson about importance of air power from his participation in the De la Huerta Rebellion of 1923–1924 – when DH.4Bs of the MAS made his life and the lives of his troops miserable – Estrada went to quite some extent to obtain air support for his adventure. Knowing about the combat capabilities of the MAS, he explicitly began searching for an aircraft that was more agile and faster than the de Havillands. Moreover, among the people he had recruited were several former pilots of the Aviation Service who were living in exile in the USA, and he managed to secure the services of three of them, including one of his relatives. Moreover, he acquired several pipe bombs.

Ryan Airlines, Inc.

Born in Parsons (Kansas), in 1898, Tubal Claude Ryan began his flying career in 1917 when enrolling in the American School of Aviation at Venice. He graduated as a civilian pilot and was accepted into the Army Air Service although still underage. His military flying career ended before it even began: the armistice ending the First World War was signed before he could actually join. Thus, Ryan went to Oregon State College to study engineering instead and was subsequently accepted into the Aeronautical Division of the US Army, where he graduated as a military pilot in 1921. Once his enlistment ended, in 1922 he moved to San Diego and bought a Curtiss JN-4 Jenny from military surplus, before launching his own aircraft manufacturing business. The company's first product came into being through Ryan developing the concept, from which William Waterhouse from Los Angeles (who subsequently became involved in an aircraft factory in Tijuana) then drew a design, which in turn was completed by Hawley Bowlus from San Diego. The Result was the Ryan M-1: a high-wing monoplane with enough space for three crew and passengers. The first took to the air on 14 February 1926, powered by a Hispano Suiza engine of 150 horsepower: subsequently, it was repeatedly modified to accept various other engines, including the Curtiss OX-5, Super Rhone, and the Whirlwind (of 200hps). The M-1 proved quite a commercial success: at least 14 were manufactured in a matter of only a few months: construction of each cost around US$9,500 (including the engine), while they were sold for around US$14,500. Several were acquired by small airlines: five or six of these (all powered by Whirlwind JB-4 engines) – later increased to nine, to replace several losses in accidents – went to Pacific Air Transport (PAT), a corporation formed by Vern C Gorst, a self-trained pioneer pilot and 'granddad' of United Airliners. Indeed, the aircraft proved successful enough for the US

General Estrada disembarking a Junkers-Larsen JL-6s in Mexico. (*Instituto Nacional de Antropología e Historia*)

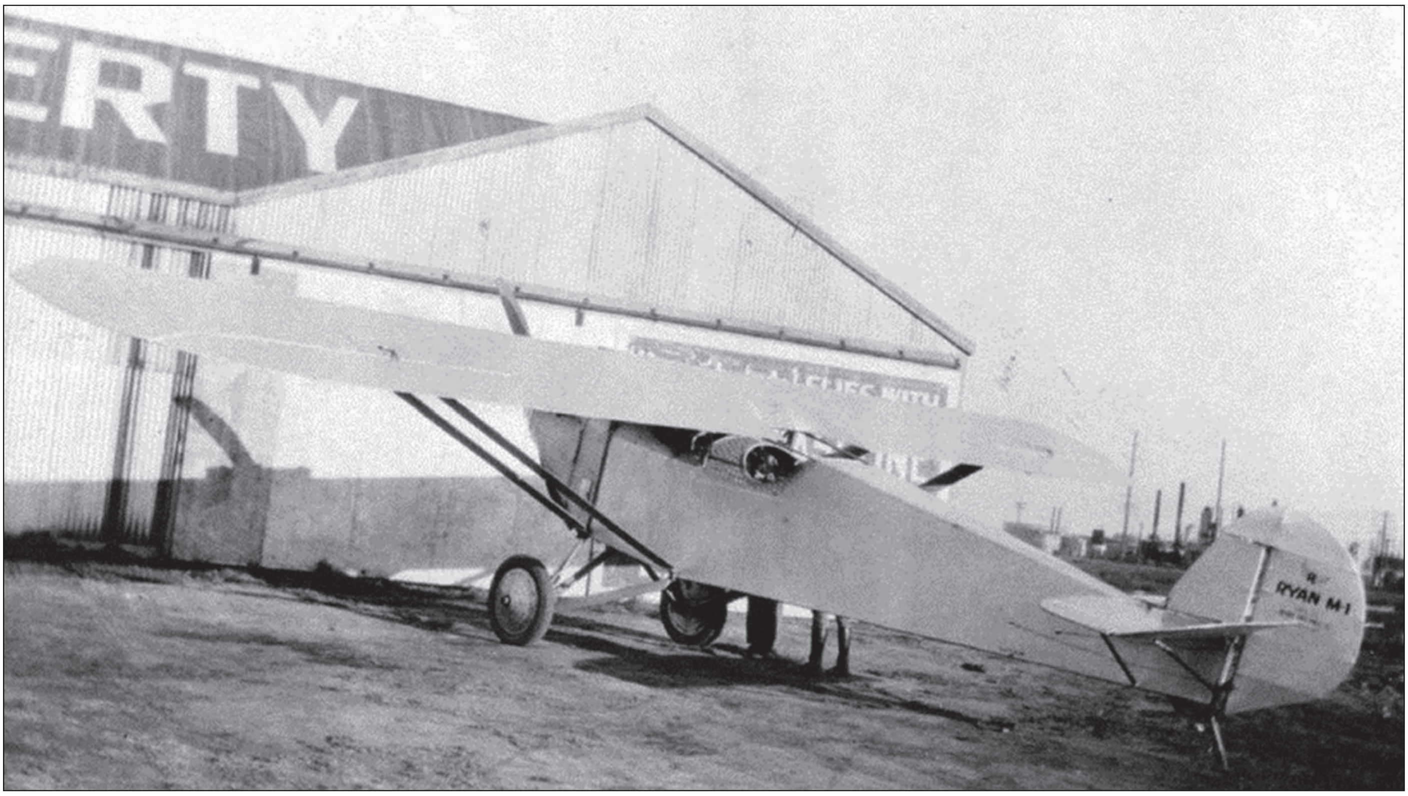
T Claude Ryan was a co-founder of Ryan Airlines, Inc., located at Dutch Fields in San Diego, California, and the designer of the Ryan M-1 parasol monoplane. (San Diego Air & Space Museum)

Ryan's partner was B Franklin Mahoney, who co-established the Ryan Flying Company and School of Aviation. (San Diego Air & Space Museum)

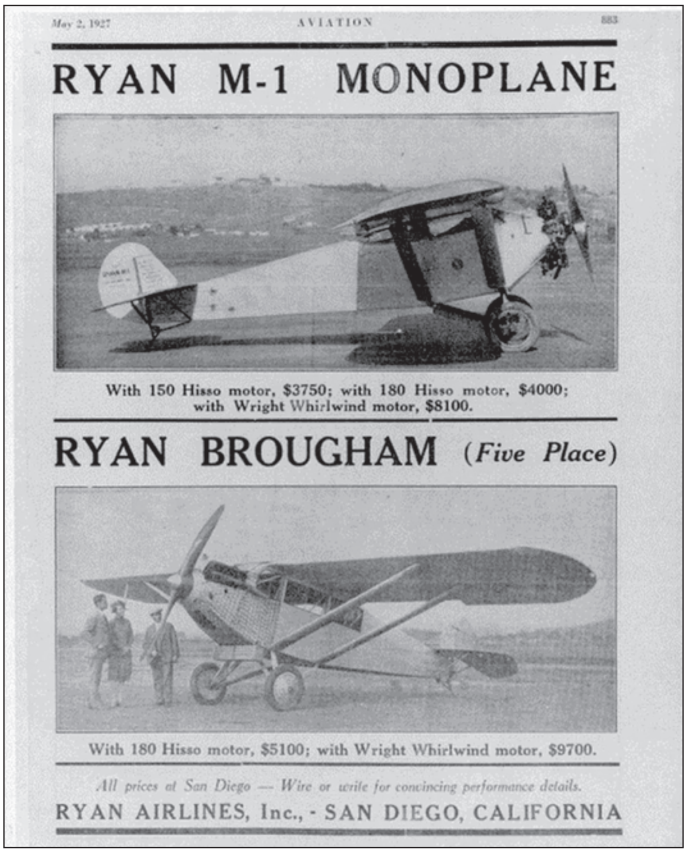
government to contract Ryan to fly the mail – which was a highly profitable business at the time.

Despite this success, Ryan then found himself without a customer for five partially assembled M-1s equipped with the Hispano Suiza engine. Already concerned about the future of his business, he then ran into Earle C Parker, who was searching for five aircraft required for a promotional scheme for a new product. From that point onwards, there are significant differences about subsequent events as narrated by Ryan and by other sources.

In his work *San Diego Flying Days*, the local aviation historian Ed Leiser reported that in August 1926, Ryan Airlines announced the delivery of six M-1s to PAT for service on the Los Angeles–Seattle route and received an order for three M-1s from Denver in Colorado, expected to be fulfilled at a rate of one aircraft per month. However, the *Aero Digest* from August 1926 reported that Ryan delivered only five M-1s to PAT, that the latter requested four additional aircraft within 30 days, and that the author of the article in question saw four of these under various stages of construction at the Ryan Airline plant in Juniper Street. Yet another source, Bill Mills in his book *The Estrada Plot* – which was largely based on court records and documentation – wrote that during the week of 13–19 June 1926, Earl Parker, José Healy, and Benjamin Roque visited Ryan to purchase aircraft under the guise of a publicity campaign for a new product. The three men returned on 30 June to sign a contract for four Hispano Suiza-powered M-1s worth US$14,000 and to make a down payment of $3,000. Officially, all aircraft were to come under the ownership of José Healy, and the contract stipulated the delivery of two within 30 days, and another two within 45 days – i.e. by 15 August 1926.



A complete Ryan M-1 in front of the hangar of the Ryan Flying School at Dutch Fields, today the site of San Diego International Airport. (San Diego Air & Space Museum)



May 2, 1927 AVIATION 883

RYAN M-1 MONOPLANE

With 150 Hisso motor, $3750; with 180 Hisso motor, $4000;
with Wright Whirlwind motor, $8100.

RYAN BROUGHAM (*Five Place*)

With 180 Hisso motor, $5100; with Wright Whirlwind motor, $9700.

All prices at San Diego — Wire or write for convincing performance details.

RYAN AIRLINES, Inc., - SAN DIEGO, CALIFORNIA

An advertisement for the new Ryan M-1 monoplane and Brougham five-place high-wing monoplane. Note the differences in prices, depending on the powerplant. (San Diego Air & Space Museum)

Problems with the Department of Justice

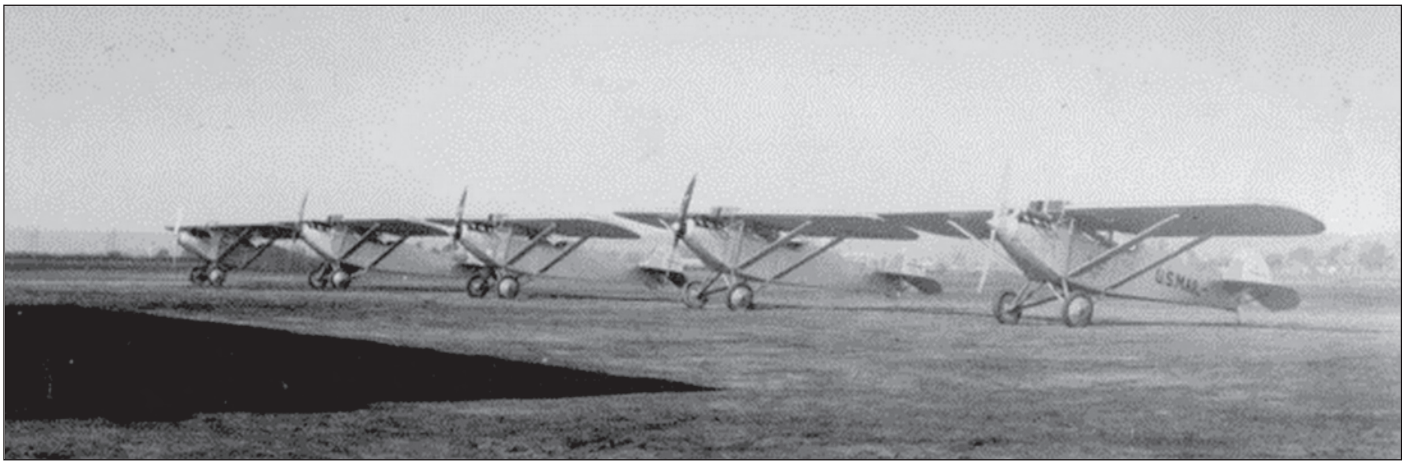
Whether Ryan knew that Parker, Healy, and Roque worked for Estrada remains unclear. What is certain is that Parker had his own Parker Hardware Company, and a store in Fifth Street of San Diego, and another store in Los Angeles, and was contacted by Estrada to obtain arms and equipment quite soon after the Mexican general decided to launch his own rebellion. The local office of the Department of Justice was alerted about the Estrada-Parker connection when receiving a tip about the purchase of trucks and their modification with armoured plates. It launched an investigation and began monitoring both Estrada and Parker's activities. Before long, the Federal Bureau of Investigation became involved via its office in Los Angeles, and its agents paid a visit to the general, but he denied involvement in any kind of illegal activities. Thus, when Estrada decided to launch his operation, and packed all of his arms, equipment and troops onto the trucks and left Los Angeles on 14 August, the US authorities were taken by surprise. The agents of the Department of Justice that followed the column quickly figured out that it was about to cross the border near Tecate, probably with the intention of securing that town. The agents went into action shortly after the Mexican column passed San Diego: they stopped it and arrested 136 would-be rebels. Amongst these were former generals of the Mexican Army Ramon B Arnaiz, Agustín Gamou, and Nicolas Rodriguez, and pilots Santana and Estrada. Shortly later, Estrada and Parker, together with the third mercenary pilot, Faustino García, were arrested in La Mesa. Because they were so numerous, all the arrestees were interned at Fort Rosecrans. Later on, all were released on bail.

According to Ryan, he was entirely unaware of these affairs: early on the morning of 14 August, he had five M-1s completed, one of which had been sold to Colorado Airways. All were rolled out, lined up on Barnett Avenue and polished by his employees (there is a photograph confirming this). However, nobody picked them up. Instead, when receiving their morning papers – possibly the *San Diego Union*, early on 17 August 1926 – Ryan and Mahoney were shocked:

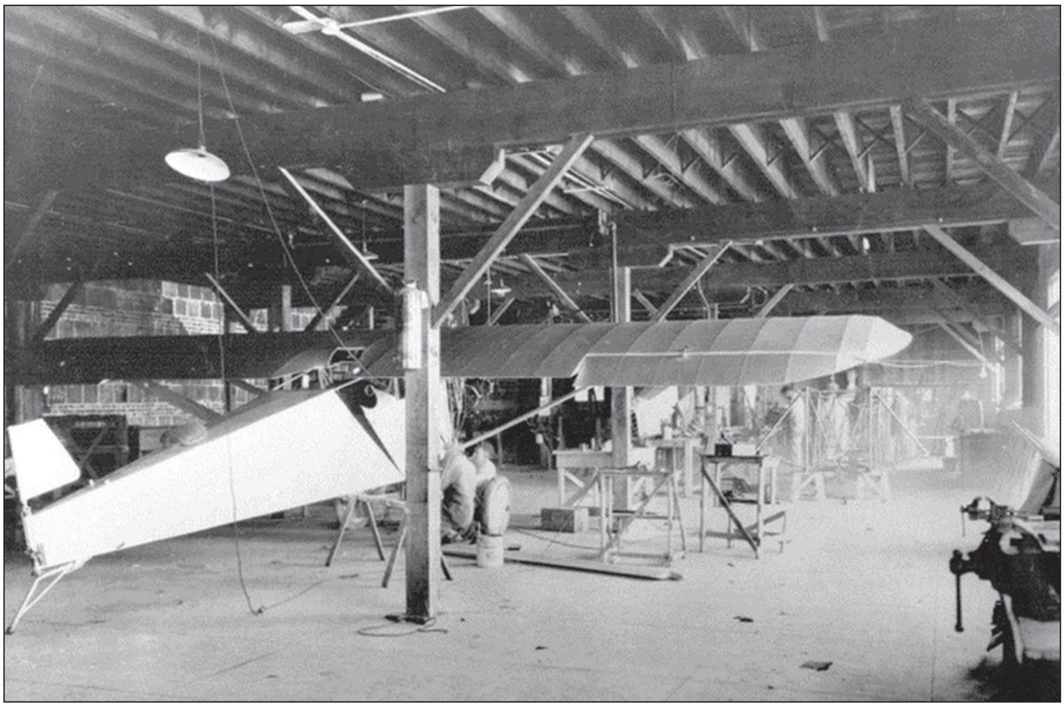
> Never saw [such] big streamers in your whole life, they were about three inches high. Said "Mexican Revolution Plot Uncovered, Trucks Captured"…. several trucks captured on border road… the road along the border and an American and they gave his name, and it was the leader of the American side of the plot and… one of the leaders…and here was our…fellow that had given us the order….

Almost a week later, on 23 August 1926, the *San Diego Union* filled a report according to which an aircraft linked to Estrada's plot crashed in California. The article in question – which eventually proved wrong – read:

> **CRASH LINKED WITH REVOLT**
>
> **Passenger Killed, Pilot Hurt When Plane Falls Near Los Angeles.**
>
> By United News, LOS ANGELES, Aug.23.- One man was killed, and another probably fatally injured, when an airplane fell at Inglewood a suburb of Los Angeles, last night. Authorities are investigating a report that the men were flying to La Mesa, as part



This photo appeared in Ryan's biography and shows the five M-1s ready for delivery to the customer. Eventually, the first aircraft on the right was delivered to the US Mail instead. (San Diego Air & Space Museum)



Despite clear evidence to the contrary, contemporary press reports in the USA described scenes like this one, with semi-finished aircraft inside the workshops. (San Diego Air & Space Museum)

> of a new revolutionary plot to overthrow the Calles government. Angelo Urrea a passenger, in the plane was killed instantly and Manuel Caballero the pilot was taken from the wrecked plane unconscious. He is in the Inglewood hospital not expected to live. Police were searching for a third man who is said to have disappeared following the crash.

The actual names of those involved were Angelo Urrera, who was killed; Raymond Urrintecochar, who was severely injured with a fractured skull, and Manuel Caballero: according to other newspaper accounts, it turned out that the latter was the owner of the aircraft, had purchased it only about a week earlier, and obtained his pilot's licence just a month before.

Late in the afternoon of same day, US Federal officials seized four M-1s from the Ryan factory: according to official documentation, two were completed and ready for use, while the other two required being fine-tuned and having their engines installed. This was reported by the *Los Angeles Times*, two days later, which also mentioned that they were Ryan M-1s equipped with the 150-horsepower Hispano Suiza engines. The same report quoted Ryan's statement that he rented the aircraft for advertising purposes.

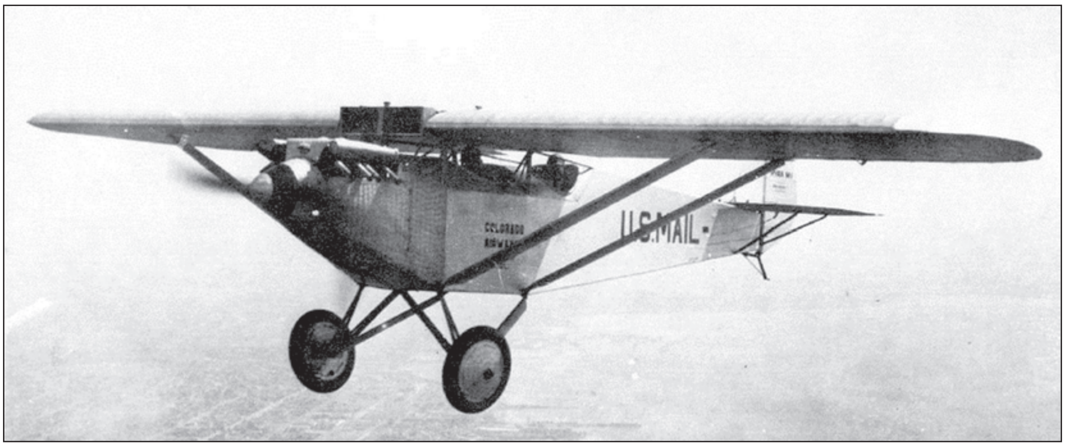
On 24 August, the *Evening Tribune* confirmed that there were four aircraft seized, all of monoplane design:

> **LIBEL ORDER TO BE ASKED OF US COURT**
>
> Four airplanes, to have been destined for a part in the Gen Enrique Estrada revolutionary movement in Lower California were seized yesterday by agents of the United States Department of Justice, working on the case here. It was revealed today at the Federal building. The seizure was made at the Ryan aviation field. Announcement of the taking of the planes was made today by J George Ohannesian assistant United States attorney in charge of the prosecution of the revolutionaries. Shortly after making the announcement the attorney went into conference with A. Hopkings Department of Justice agent in charge of the case, to assemble the facts to form the basis of the complaint, it was believed.
>
> Ohannesian declared this morning, that no arrest has been made, but intimated that there will be apprehensions in connection with the airplanes soon. The planes taken, are of the monoplane type and it is said by officials that they could have been capable of great destruction, over the small Lower California towns had the revolutionaries been successful in making its way across the border. That T. C. Ryan had rented the planes to others, who told him that they were to be used for an advertisement stunt was the statement of the federal attorney today. Ohannesian said the airfield heads are not suspected in the revolt plot.
>
> Last night a guard was appointed by Deputy of the United States Marshall Keno Wilson, was placed over the planes at the flying field. Ohannesian said today that an order libelling the planes will be asked of federal court in this district….
>
> It was learned this afternoon that a contract to purchase the four aircraft from the Ryan Flying Company is in the possession of Federal officials here. It was said at the United States attorney's office that the contract was entered into one of the men held for the commissioners hearing next month. We do know that Ryan Company knew what the planes were to be used for, but the matter is being investigated, said J. George Ohannesian government attorney. The official stated that the planes are to be taken to Rockwell Field for safe keeping pending their disposition after the case is heard. An application by Ryan for the return of the planes was denied by Ohannesian.

Participants subsequently claimed the aircraft were taken to a US Marine Corps recruit depot, which was much closer than Rockwell Field. Later Ryan tried to get the aircraft back, as reported in the *San Diego Union* of Friday 27 August 1926:

> **RYAN ASKS RETURN OF FOUR REBEL PLANES**
> **PETITION IS FILED IN COURT**
> **Official of Local Company Denys Knowledge that Craft were to be used in Alleged Estrada Plot.**
>
> (Associated Press) LOS ANGELES, Aug.26.- Return of four planes seized by federal officers from the Ryan Airline factory, at San Diego upon the supposition that they were to be used in a revolutionary invasion of Mexico by Gen. Enrique Estrada, was asked in a petition filed in federal court today. Estrada and his followers were arrested near San Diego recently. The petition declares that the airplanes, seized had not been assigned to any purchaser and that officials of the airplane factory had no knowledge that craft ordered but Jose E. Healy, secretary to Estrada and now under

> arrest here, were to be used in a revolutionary plot.



A Ryan M-1 in flight, operated by the US Mail. It proved highly successful in service, prompting Ryan to design even better aircraft for transport of mail and passengers. (San Diego Air & Space Museum)

In the end Ryan, with attorney Mr. William G. Munro (Mirow) talked to the Assistant US Attorney, whom they convinced to released three of the four planes, and keep one for evidence, as Ryan remembered; 'This would be enough evidence and to not work much such a hardship on us. So, they did. They released the four (sic) of them. We had good luck, them over a period …relatively short period of time finding buyers for them. We got out of a jam…'

On the same day, Ryan answered a letter from Giuseppe Mario Bellanca, who was proposing to establish a joint aircraft-manufacturing company with him:

> Although we have been very busy, I have had the time to give the contents thought…
>
> The first Ryan M-1 monoplane was flown in February of this year, and since that time we have built fourteen planes of this type. At present our rate of production is about three planes per month, with orders coming in much faster than we can build the planes. We feel very much encouraged over our outlook. Financially the company is sound. We have sufficient capital for our needs and should we desire more it is available…

It is unknown if Bellanca had any idea what was going on with Ryan Airlines, since some news did reach the east coast, but other news did not. It is reported that the aircraft were re-engined and sold. But in a letter written after the event, Tom Mathews who was a pilot for Ryan wrote the following:

> I was doing a lot of office work in the beginning, but when Georgia came to work as Ryan and Mahoney personal secretary, it certainly was a giant step forward from all angles. The Ryan M-1 Project was started in 1926. Waterhouse, who started the engineering on the project could not (or would not) keep up with the drawings needed so Bowlus (William H. Bowlus) and the boys had to sort of "Build it", out of their heads as they went along. The fact that it flew as well as it did indicates a lot of the natural ability in that group.
>
> Building the M-1s cost the company a lot of money, and it did not help any when the T men grabbed off 5 of them and impounded them, on the marine base to head off a revolution in Mexico, they said. I think we finally got four back, but we had to get busy and sell some so we could pay bills.
>
> I was given a list of Northern California prospects, and $67.50 expense money and Joe Barrows, and I climbed into one of the M-1s and headed north. We were gone about a month and got a lot of publicity but no sales. I remember when we got back, or almost back (we ran out of some gas at Torrey Pines Marine base) Joe was supposed to get some gas and fly it but he decided to go home and spend thanksgiving with his folks, I got a ride in.

The fourth aircraft was moved to a building over at the Marine base and returned after the end of the trial of Parker. Ryan got to keep $500 per plane, as forfeiture as he mentions in his account. But based on the new information, Ryan might have got to keep $14,500 for all the aircraft.

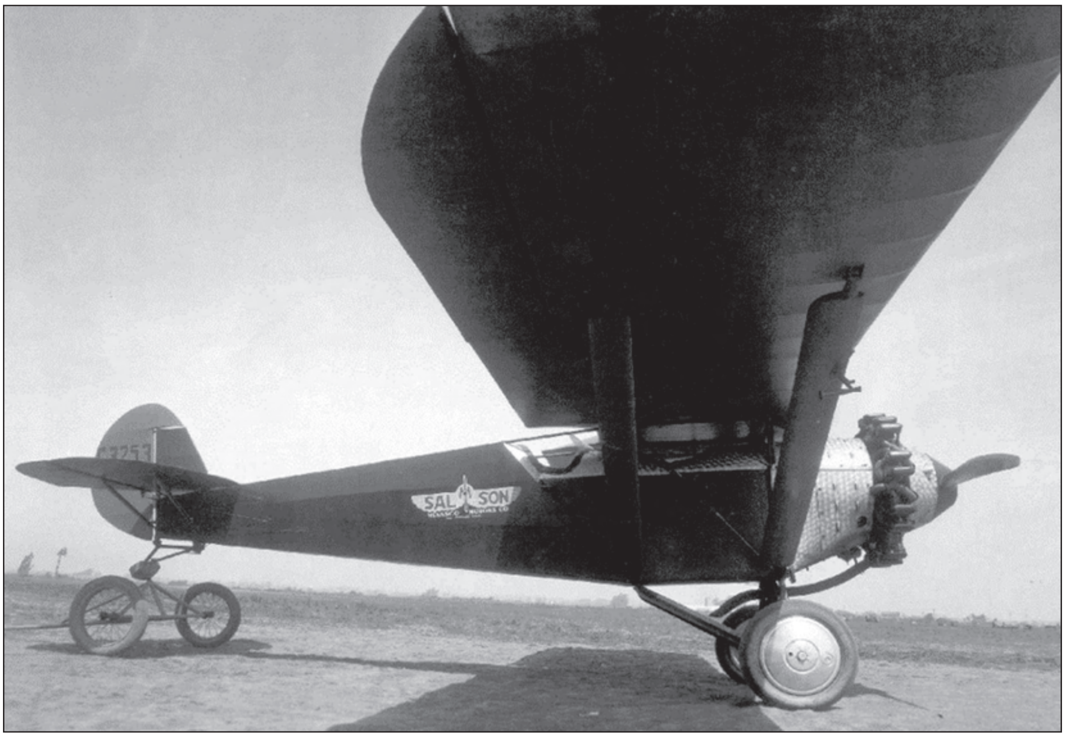
The court records show that in February 1927 the judge ordered the Ryan monoplane and two GMC trucks be returned to their original owners. When the fourth M-1 was returned it was in bad shape, had to be rebuilt, and was sold to the Menasco Motor Company of Los Angeles California to be used as a test bed for the conversion of the French Salmson engine. This conversion was flown to Butte for subsequent purchase by Jack Lynch and the Chicago-Northwest Air Transportation Company. Photos of this aircraft with the Salmson Menasco engine emblem appear with the aircraft registration C3253.

This aircraft appears in the available records to have had the construction number 10. It was purchased by an Albert S. Mooney Jr. of Butte Montana who, on 17 April 1971, wrote to Ryan aircraft historian Everrett Cassagneres:

> Dear Mr. Cassagneres:
>
> In checking over some old papers, I came across the following, on my old Ryan monoplane: I purchased it from a L.A. Carson of 1230 Trolo St. Los Angeles (sic), California for the sum of $3,700.00 on September 2, 1927. Motor #5023 – temporary license 3122 – Type M. Serial #10 – registration No.3219
>
> Yours Truly
> Signed
> Albert S. Mooney Jr.

This M-1 ended up flying in Montana, with pilot George Allen, for Northwest Airways, as mentioned by Frank Wiley author of a book of aviation in the state of Montana:

> George Allen flew an original M-1 dubbed the 'Mexican Revolution Ryan', to Butte Montana. It was one of four of the M-1 types, sold to a group in Mexico that was organizing a revolution, against the Mexican government. The border patrol had stopped a truck, two years before loaded with weapons and munitions. One of the occupants had a receipt for a deposit on four Ryan planes. Customs confiscated the planes from Ryan, but later released them for resale, except for the one flown by Allen. It was kept as evidence in case charges were brought against the smugglers, who were planning on using the four planes in the revolution.



One of the M-1s confirmed as delivered to Mexico was this example: construction number 10 and registration C3253, previously operated by the Salmson Company from Los Angeles. (San Diego Air & Space Museum)

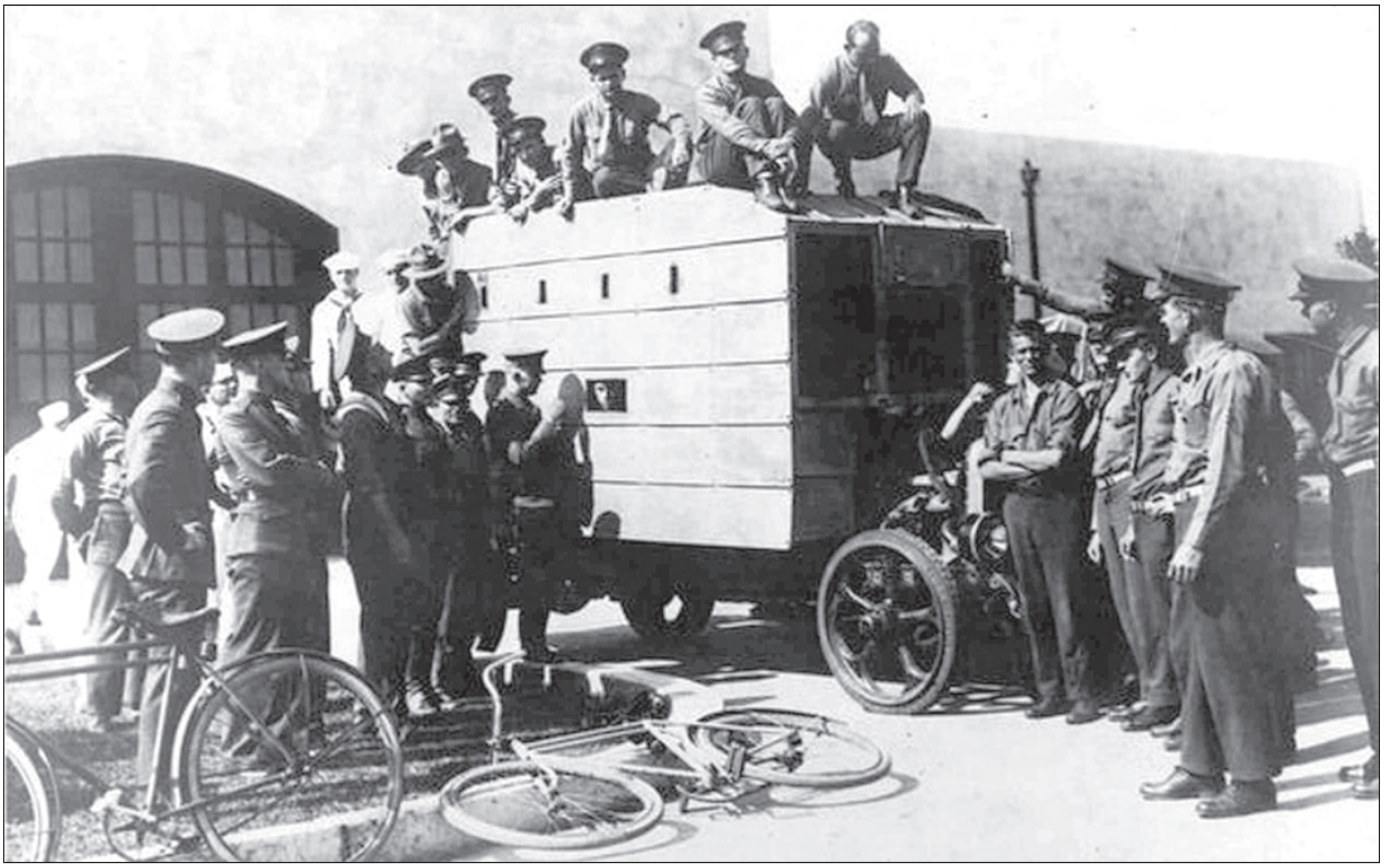
A certificate of air worthiness was issued on 2 March 1933, but it was finally cancelled on 15 February 1935. No information is known to have survived for construction numbers 12, 13 and 14.

The Trails

In the records of the Los Angeles Federal Court, among the defendant's that were tried are the names of the three former Mexican Military Air Service pilots, mentioned in the earlier chapter of the De la Huerta rebellion. A number were implicated in the revolt and many lefts for exile in the United States.

In criminal docket 8051#C is a listing of 154 defendants that includes the leaders, among those listed are Faustino García, Ascensión Santana, and Juan Manuel Estrada. They had been part of the *escuadrilla* of Farman F.50Bn2 bombers from the *Escuadron de Bombardeo Pesado* (Heavy Bomber Squadron) stationed at Guadalajara Jalisco. Because they were in rebel territory, they were dismissed from the service on 7 December 1923 by presidential orders.

As mentioned in previous chapters, Ascensión Santana was the *escuadrilla*'s commander with the rank of *Capitán 1/o*. Faustino García was a *Teniente*, as was Juan Manuel Estrada. We know that Ascensión Santana, later returned to Mexico in 1931, and rejoined



US Marines examining one of the armoured cars made for Estrada and his planned invasion. This one was seized in the Mexicali area. (San Diego Air & Space Museum)

STOP
FUEL DEPOT

A part of the rebel force captured by the US authorities at La Mesa. This group of around 136 was taken into custody to Fort Rosecrans. (San Diego Air & Space Museum)

The arrested rebels seen while in captivity at Fort Rosecrans, in San Diego, California. (San Diego Air & Space Museum)

the air service as a sergeant mechanic until 1937. He would later retire with the rank of *Teniente Coronel*. Faustino García also returned to Mexico and was allowed back into the air service but was killed in an aviation accident in 1937 at Balbuena Airfield.

The above thus indicates that Estrada had pilots available. Another source of information in the criminal docket shows that two pilot licenses marked as evidence, or exhibit #78, were returned in November 1928. The only thing that does not make any sense at first is why Estrada launched his invasion when the four aircraft he had ordered had were not yet ready to fly. This is possibly because he sensed that Federal agents were already on his tail and could have derailed his plans or warned the Calles government. Another possibility is that he was hoping to have a foothold in Baja California, at either Tecate or Mexicali, to bring his aircraft forward and maybe try to hire more pilots.

Estrada was sentenced to one year and nine months in prison with a fine of $10,000, while R.B. Arneiz and Nicolas Rodriguez were each sentenced to one year and four months imprisonment and $5,000 fines. Pilots Juan Estrada, Faustino García and Ascensión Santana were each sentenced to one year and one day imprisonment and fined $1,000. All would serve time in McNeill Island Correctional Center, Washington State. Parker became the government's star

The Douglas-Lockheed-Ryan-Northrop Connection

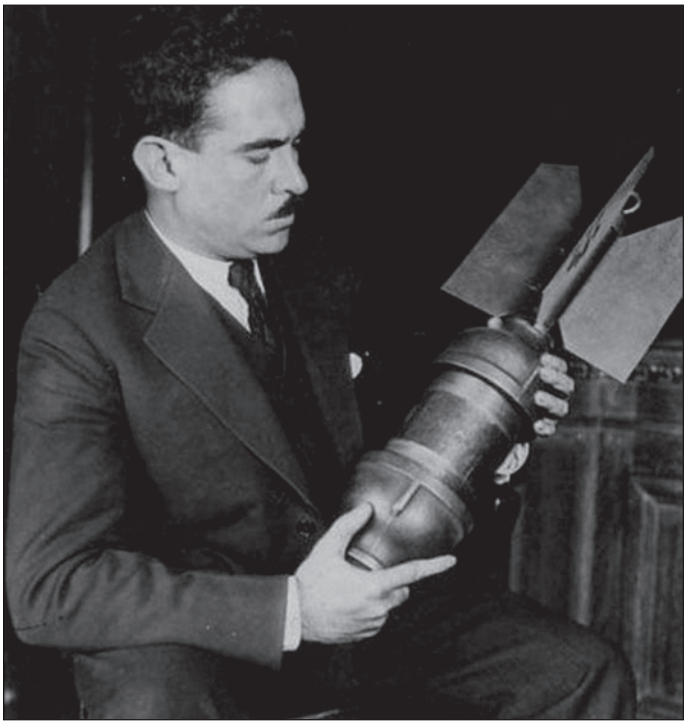
Born in Newark, New Jersey, in 1895, Jack Northrop grew up in Santa Barbara, California. His first job in aviation was working as a draftsman for the Santa Barbara-based Loughead Aircraft Manufacturing Company. During the First World War, he was drafted into the US Army, and served in the Army Signal Corps for six months, before Loughead successfully petitioned for his return to work.

Tubal Claude Ryan was an aviator born in Parsons, Kansas, in 1898. He began his flying career in 1917, when entering the American School of Aviation in Venice, California and was accepted into the Army Air Service on the same day the armistice ending the First World War was signed. He then went to Oregon State College to study mechanical engineering and was subsequently accepted into the Aeronautical Division of the US Army, where he learned to fly at the March Field, California in 1921. Over the following year, Ryan flew forestry patrols in northern California and Oregon, before funding the Ryan Flying Company. This service operated four Curtiss JN-4 Jennys for joyrides, charter trips, and flight instruction, before offering the first round-trip flights between Los Angeles and San Diego in 1925.

RYAN M-1
MFD BY
RYAN AIRLINES
SAN DIEGO, CALIF

One person that heard about the Ryan M-1 was a former US Mail pilot by the name of Charles L. Lindbergh, who then requested that Ryan design and build him an aircraft for a flight from New York to Paris. (San Diego Air & Space Museum)

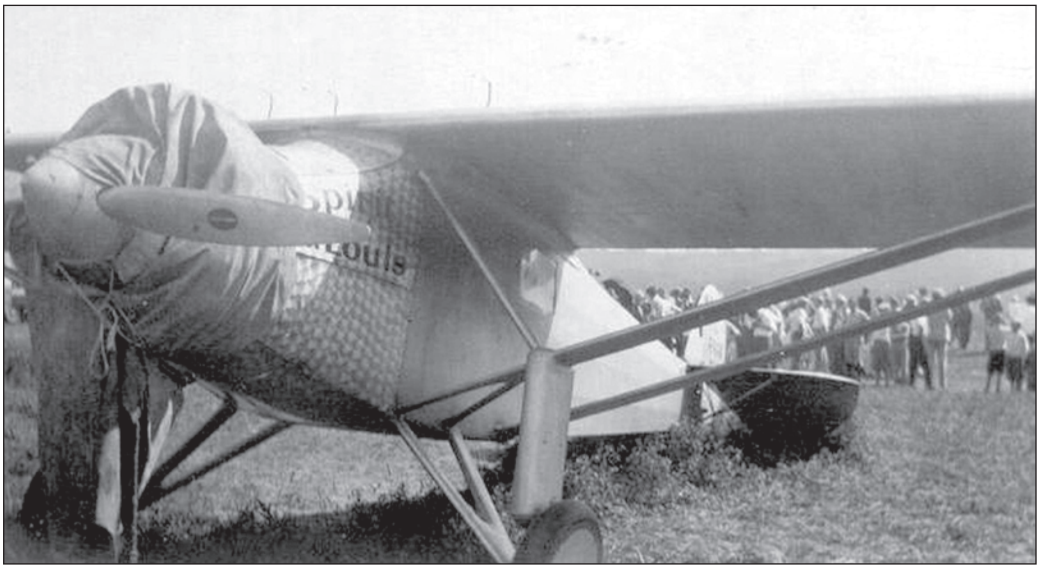
Meanwhile, in 1923 Jack Northrop joined the Douglas Aircraft Corporation, and was assigned the position of project engineer. Three years later, while still working for Donald Douglas, he entered cooperation with Ryan who was now in a business partnership with a young stockbroker and real estate developer named Benjamin Franklin Mahoney. In cooperation with Northrop – who was still working for Donald Douglas – the two developed the Ryan M-1 monoplane mail aircraft, first flown in 1926. Northrop then went a step further and designed a much stronger and easier-to-manufacture wing spar, and two parallel longitudinal wood slats along the side of the frame – resulting in the Ryan M-2. Although both designs were highly successful



General Enrique Estrada holding one of the homemade bombs that would have been rigged to the Ryan M-1s. He was found guilty of conspiracy and served time in a US jail. (San Diego Badge History)

Cap. piloto Ascensión Santana.

One of three former MAS pilots involved in Estrada's plot was *Capitán* Ascensión Santana, a survivor of the *Delahuertista* rebellion. He also served time in a US jail. (*Revista Tohtli*)

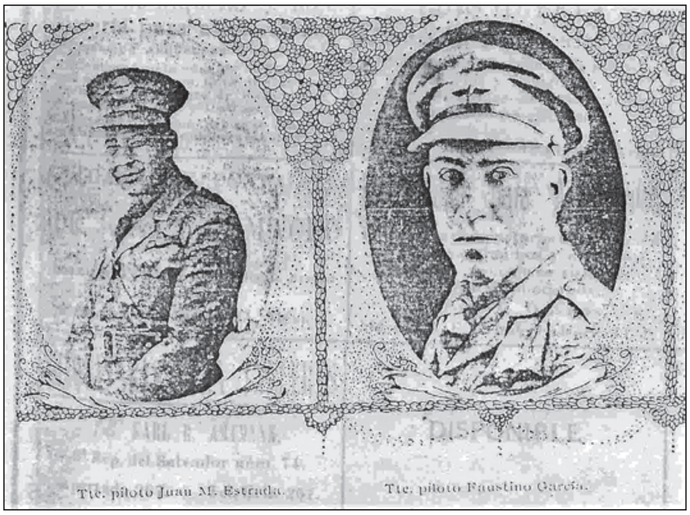


Spirit of St Louis (Tom Cooper Collection)

(indeed: leading to the creation of modern-day aircraft as we know them), Ryan and Mahoney ended their partnership later the same year. Ryan's role in what became the short-lived Mahoney Aircraft Corporation is hotly debated until this very day, especially because of his use of the income from selling his share in Ryan Airlines to Mahoney so that he could buy the US distribution rights for the German-made Siemens-Halsk Sh.12 radial engine. He installed one into an M-2 and began marketing the 'new' aircraft as the Ryan-Siemens 9, and then formed the T. C. Ryan Flying School, and the (first) Ryan Aeronautical Corporation (all of this in San Diego in 1927). Ultimately, the M-2 was the predecessor of the famous monoplane *Spirit of St. Louis*, which the Ryan Aeronautical Corporation custom-manufactured to perform the first uninterrupted transatlantic flight – from Roosevelt Field on Long Island, in New York, to Le Bourget, then outside Paris – undertaken by Charles Lindbergh on 20–21 May 1927.

In the same year, Northrop rejoined the Loughead brothers and the Lockheed Aircraft Company and worked as chief engineer for the Lockheed Vega transport aircraft, which promptly proved a major success because of its high performance. Two years later, he founded the first of his own enterprises, the Avion Corporation, but due to the Great Depression was forced to sell it only a year later. Northrop kept on pushing and in 1932, supported by Donald Douglas, founded his next enterprise: the Northrop Corporation, based in El Segundo, California. With this mostly functioning as a subsidiary of Douglas Aircraft for the first decade of its existence, in 1939 Northrop went a step further and – in cooperation with Moye Stephens – created the completely independent enterprise in Hawthorne, California.

Thus, it can be said that the history of the Mexican Military Aviation Service is at least 'associated' with that of such famous US aircraft designers and manufacturers as the modern-day giants Lockheed-Martin, Boeing (who acquired the former McDonnell-Douglas), and Northrop-Grumman.


Tte. piloto Juan M. Estrada.
Tte. piloto Faustino García.

Two other pilots that joined Estrada were Juam M Estrada (relative of the coup plotter), and Faustino García. Both were captured by the US authorities, prosecuted and jailed. (*Revista Tohtli*)

witness against Estrada and received a suspended sentence with one year of probation and his bond exonerated.

After his release from prison, Estrada would eventually return to Mexico even after he supported the 1929 Escobar Rebellion. As a result of the amnesty given by President Lázaro Cárdenas, during the late 1930s, he would serve in the Army, and later served as chief of the railroads, and finally as Senator for the state of Zacatecas. He died in Mexico City on 3 November 1942.

BIBLIOGRAPHY

Amaro, Luis, Sánchez, *Rebelión delahuertista en Michoacán, 1923-1924* (INEHRM, México D.F., 2016)

Ballard, Jack Stokes, and Parks, James John, *The 147th Aero Squadron in World War I, a Training and Combat History of the "Who Said Rats" Squadron* (Shiffer Publishing Ltd. Atglen PA, 2013)

Bailey, Frank W. & Cony, Christopher, *The French Air Service War Chronology 1914-1918, Day-to-Day Claims and Losses by French fighter, bomber, and two-seater pilots on the Western Front* (Grub Street, London, England, 2001)

Cárdenas de la Pena, Enrique, *Semblanza Marítima del México Independiente y Revolucionario* (Secretaria de Marina México, D.F., 1970)

Carpenter, Dorr B., and Mayborn, Mitch, *Ryan Guidebook American Aircraft Series Book 3* (Flying Enterprise Publications, 1975)

Casari, Robert B., *American Military Aircraft 1908-1919* (Aeronaut Books, Reno, Nevada, 2014)

Casari, Robert B., *Encyclopaedia of U.S. Military Aircraft 1908 to April 6, 1917, Vol.3 Curtiss J, N, JN-2, JN-3, and JN-8* (Self-published, USA, 1972)

Casasola, Gustavo, *Anales Gráficos de la Historia Militar de México, 1810-1991* (Editorial Gustavo Casasola, México, 1991)

Casasola, Gustavo, *Historia Grafica de la Revolución Mexicana 1900-1970, Volumen 1 al 7.* (Editorial Trillas S.A., México, 1992)

Castro, J. Justin, *Radio in Revolution, Wireless Technology and State Power in Mexico, 1897-1938* (University of Nebraska Press, Nebraska, 2016)

Córdoba, Medardo Torres, *Historia de la Iniciación de la Fuerza Aérea Mexicana* (Secretaria de la Defensa Nacional, Estado Mayor, Sección Segunda, México, D.F., 1962)

Fierro, Villalobos Roberto Piloto Aviador, *Esta Es Mi Vida* (México. D.F., 1964)

Flores, Santiago A. *Mexicans at War, Mexican Military Aviation in the Second World War 1941-1945, Latin America @War No.9.* (Helion & Company, Warwick, 2018)

Franks, Norman L.R., & Bailey, Frank W., *Over the Front a Complete Record of the Fighter Aces and Units of the United States and French Air Service 1914-1918* (Grubb Street, London, 1992)

Franks, Norman, *Nieuport Aces of World War I. Osprey Aircraft of the Aces No.33.* (Osprey Aviation, Oxford, 2000)

Franks, Norman, *Spad XII/XIII Aces of World War I.* Osprey *Aircraft of the Aces No.47.* (Osprey Aviation, Oxford, 2002)

García del Alba, Agraz, Gabriel, *Piloto Aviador Alfonso Virgen Meza, El As de los Vuelos Nocturnos* (Privately Published, México. D.F., 1997)

Gordon, Dennis, *Lafayette Escadrille Pilot Biographies* (The Doughboy Historical Society, Washington D.C., 1991)

Grigore, Julius. *The Black Swan and the Rape of an Airline Volume I* (Independent Publishing Format, Amazon, 2012)

Guttman, Jon, *Reconnaissance and Bomber Aces of World War I, Osprey Aircraft of the Aces No.123*, (Osprey Aviation, Oxford, 2015)

Guttman, Jon, *USAS 1st Pursuit Group, Aviation Elite Units* (Osprey Aviation, Oxford, 2008)

Hennessy, Juliette A., *The United States Army Air Arm April 1861 to April 1917, The United States Air Force General Histories* (Office of the Air Force History, USAF, Washington D.C., 1985)

Izquierdo, General de División Donato Bravo, *Lealtad Militar, Campana en el Estado de Chiapas E Istmo de Tehuantepec 1923-1924* (México, D.F., 1948)

Jowett, Phillip S., *Latin American Wars 1900-1941 Banana Wars Border Wars & Revolutions* (Osprey Publishing, Oxford, 2018)

Larumbe, Duran, Pablo. *Aviación Mexicana* (México, D.F., 2008)

León, Toral, Brig. DEM Jesús de, Gral., *El Ejército y Fuerza Aérea Mexicanos* (S.D.N, México D.F., 1979)

O Neill, Ralph, with Hood, Joseph F., *A Dream of Eagles* (Houghton Miffin, San Francisco, 1973 USA)

Pieter, Walter, *The Belgian Air Service in the First World War* (Aeronaut Book, Reno, Nevada, 2010)

Mills, Bill, *The Estrada Plot, How the FBI Captured a Secret Army and Stopped the Invasion of Mexico* (Potomac Books, 2020)

Ruiz, Romero, Manuel, *Aviación Militar Historia de la Fuerza Aerea y de la Aviación Naval* (México, D.F., 2004)

Secretaria de Guerra y Marina, *Memorias Presentadas al H. Congreso de la Unión por el Secretario del Ramo Gral. De División, Joaquín Amaro, 1 de Agosto 1926-31 de Julio 1927* (México, D.F., 1927)

Articles

Córdoba, Torres Medardo, *El Suicidio del Capitán Carranza* (Revista El Legionario, date unknown, México D.F.)

Roesler, Alan, & Brown C. Christopher, *Ralph O Neill Arizona's Other Ace* (Over the Front, Vol.27 No.3, Autumm 2012)

Ruiz, Romero Manuel, *Plutarco Elías Calles y la Aviación Mexicana* (Quauhtli Revista de Historia de Aeronáutica de México, Numero 1 Edición 1999, México D.F.)

Shilrey, Noel. *An Interview with Ralph O Neill* (Over the Front, Vol.2 No.2, Summer 1987)

Magazines

Aircraft Journal, News of the Air Service (October Issue Washington D.C., 1920)

Aviación, Tomo *I, Numero I Agosto 1928* (órgano Oficial de la Asociación Mexicana de Aeronáutica, Revista Mensual. México, D.F.)

Kukulcán, Revista Órgano de la Fuerza Aerea Mexicana (Issues consulted from 1939 to 1940, México D.F.)

Tohtli, Órgano de la Escuela Nacional de Aviación (Issues consulted from 1919 to 1924, México D.F.)

Conference

Reyna, Garza Manuel, Capitán 2/o. FAAMA, *Conferencia, La Escuela Militar en la Defensa del Tren Presidencial de Carranza* (Coloquio del Historia del Centenario de la Fuerza Aerea Mexicana, México, D.F., 2015)

Newspapers

El Informador Diario Independiente, 1920 to 1940. (hemeroteca.informador.com.mx/#) Guadalajara Jalisco, México

El Universal, Mexico D.F. (various editions), via Sr. Manuel Ruiz Romero for the months of August 1920.

Excelsior Periódico de la vida Nacional, consulted for the years 1920 to 1940 México, D.F.

San Diego Union, and *Evening Tribune,* consulted at the San Diego Public Library for the month of August 1920, San Diego, California

Online Sources

California Digital Newspaper Collection (cdnc.ucr.edu)
Historia y Arqueología Marina (www.histamar.com.ar)
Newspapers by Ancestry (newspapers.com)
The Aerodrome WWI forum. (www.theaerodrome.com)

Government Sources

National Archives *Annual Report on Air Strength submitted as of July 1, 1927, U-802, A.C. American embassy in Mexico City by the American military attaché. G2 Reports* (Washington D.C.):

M.A. Mexico Report No.857 Date March 31, 1926
M.A. Mexico Report No.886 Date April 14, 1926
M.A. Mexico Report No.923 Date May 14, 1926
M.A. Mexico Report No.1047 Date August 20,1926
M.A. Mexico Report No.1116 Date Sept 22, 1926
M.A. Mexico Report No.1183 Date October 28, 1926
M.A. Mexico Report No.1612 Date July 26, 1927
M.A. Mexico Report No.1733 Date Sept.23, 1927

Personal military files at the Archivo E Historia. Secretaria de la Defensa Nacional (SEDENA). México D.F.:

Alberto, Salinas Carranza, Alberto, General de Brigada P.A.
Cantú, Jiménez, José Esteban, Coronel
Fierro, Villalobos, Roberto, General de División P.A.
León G, Gustavo, General de División P.A.
O Neill, Ralph, General Brigadier P.A.
Rodríguez, Fernández, Rolando General de División P.A
Rojas C, Samuel, General Brigadier P.A.
Salinas, Camina, Gustavo, General de División P.A.
Zayas, Palafox, Manuel, General de Brigada
Velasco, Rojas, Velasco, General Brigadier P.A.

Photographic collections

General de la Nación (AGN) México D.F.
Comandancia General de la Fuerza Aerea Mexicana México D.F.
Gral. P.A. Alberto Nájera Mercado México D.F.
Sr. Manuel Ruiz Romero México D.F.
Ing. Enrique Velasco Padilla México D.F.

Pilot logbooks

Farell Cubillas, Luis, Capitán P.A.
Fierro Villalobos, Roberto, Mayor P.A.
G. León, Gustavo, Mayor P.A.
Lezama Álvarez Alfredo, Mayor P.A.
Rojas C. Samuel, Mayor P.A.

NOTES

Introduction

1 The note of 20 April 1920 mentions that *Teniente* Samuel C Royas, the first military pilot of Mexico to graduate, became the Temporary Director of the Aviation School, taking over from *Capitan 2/o*. Benjami Becerril, who was not a qualified pilot.

Chapter 1

1 During his trip to Italy, Santarini also visited his hometown and convinced his entire family to move with him to Mexico City. Later on, the family moved to the state of Veracruz, where Santarini lived out his last few years.

2 During the First World War, Dupont served as a pilot with *Escadrille R46* of the French Air Force, and flew a Caudron R.4, a twin-engined three-seat reconnaissance biplane. On 23 September 1916, he and his gunner were wounded in combat, and their observer killed, but he managed to return safely back to base.

3 For example, in November 1919, an unknown monoplane known as the 'Gato' was in service with the 3/o Flotilla.

4 Pablo Larumbe Duran, *Aviacion Mexicana*.

5 The United States Air Service was the military flying service of the US Army: the US Air Force was established as an independent branch of the US armed forces only in 1948.

6 Del Campo, *40 Anos y Siempre con la Aviacion.*

7 Manuel Ruiz Romero, *La Aviacion durante la Revolución Mexicana.*

8 Precise details about the third aircraft remain nuclear. Cordoba, in his memoirs and various other publications, referred to this aircraft as the TNCA Serie B No.1. Noted researcher Pablo Larumbe Duran, identified it as the TNCA No. 4, and thus an early parasol type. However, that aircraft was designed and manufactured in 1916 and the Operation Diary of the Military Aviation School lists it as withdrawn from service by August 1917. Yet other researchers dispute both, and insist the aircraft was of the Serie B design but modified to a Serie A biplane. The information presented here is based on cross-examination of published accounts and photographs. The Farman F.50Bn2 wore the title *Republica Mexicana*, while the two TNCA Serie A biplanes were probably 35-A-50 and 37-A-52.

Chapter 2

1 The same company is known to have sold a Martin Biplane Pusher named *Sonora* to Mexico five years earlier, which – while flown by Gustavo Salinas – was involved in the first known air-naval battle in this part of the world, the First Battle of Topolobambo, on 4 March 1914.

2 The latter aircraft was probably a former mount of the Signal Corps, equipped with a 90hp Curtiss OX-2 engine, with the serial 50, acquired back in June 1915, and accepted to service on 1 July 1915. This aircraft was equipped with a radio and related antennas that ran from a mast mounted on the fuselage in front of the fin, to the horizontal wires strung on top of the upper wing. It is known to have been used for testing radio equipment in 1916. As for the Martin Specials (or Model S), a total of 17 were built, with one being sold to a private customer.

3 Currently the Naval Air Station North Island, outside Coronado, in California. The 91st Aero Squadron was a veteran combat unit of the First World War, when it was equipped with French-made Salmson 2A2 observation aircraft, with which it flew 303 missions in 682 sorties, losing eight aircraft, 14 killed, 13 wounded, and nine prisoners of war. In turn, the 91st claimed 21 enemy aircraft as shot down, and one probable. The unit produced four crews credited with more than five kills each, including 1st Lieutenant George C Kenny: Kenny later served as the commander of the 5th Air Force, United Sates Army Air Force, and then the commander of the Far East Air Forces in the Pacific during the Second World War.

4 Cantu returned to Mexico only years later, and died in Mexicali, on 15 March 1966.

5 In El Salvador, the Lincoln Standard in question served with the *Escuela de Aviacion Nacional*, with the local registration S-1.

Chapter 3

1 Actually, Fabris was forced to make an emergency landing near Iturbide railway station, in the Patzcuaro area (Michoacán), about 96 kilometres outside Mexico City, due to the failure of one of the engines. He arrived at Irapuato only on the next day.

2 While this could be read as an insult, in Mexico it could be seen as an expression of sympathy and of bonding over a misfortune.

3 Upon O'Neill's personal intervention, no judicial measures were applied: instead, both the aircraft and their crews were returned to Balbuena Airfield outside Mexico City and allowed to rejoin the Military Aviation Service. However, the presidential order from 28 January – backdated to 7 December 1923 – eventually decided the fate of all the pilots and ground personnel at Guadalajara: all 12 pilots and 20 technicians were discharged. This included Jacinto Rodriguez Diaz, a Guatemalan national who came to Mexico to learn to fly. He returned to his country and continued with aviation-related activities until killed in a flying accident in 1929. Amongst those discharged were also three pilots who went into exile in the USA – only to become involved in Estrada's next plot in 1926.

4 The Aeronautical Service of the French Army would not be reorganised as an independent military branch – the French Air Force – until 1934.

5 Rojas thus missed the spate of decorations and promotions for the officers and airmen of the MAS during the month of February 1924, when 35 of them were promoted to a higher Rank. He did manage to fly reconnaissance and bombing missions over Ojapa, Puerto México, and Minatitlan, during the last days of the rebellion.

Chapter 4

1 For a fuller account of the Rif War, see Helion's Africa@War *Rif War Volume 1* and *Rif War Volume 2*.

2 When considering the 'Train Incident at Vicam' it must be kept in mind that Obregón had long been heavily involved in this area, keenly following developments, and certainly involved in many affairs. Not only did he rise to military prominence through commanding Yaqui troops (in exchange for promising them land), during the Mexican Revolution, but during the De la Huerta Rebellion, he regularly bribed the Yaquis to keep them on his side, while making additional promises about their autonomy and security. Once the conflict was over, Obregón remained influential in Mexico City to the degree where many declared President Calles to be his puppet. No doubt, the general remained in close contact with Calles even once he returned to Sonora 'to farm.' On the contrary, Obregón claimed to have initiated an 'agricultural revolution' through the introduction of modern irrigation in the Yaqui Valley, and then constructed a rice mill, a seafood packing plant, a soap factory, tomato fields, a car rental business, and a jute bag factory in the area. According to the other side, he had 'entirely forgotten' about all his wartime promises to the Yaquis and then decided to sell an extensive piece of real estate – mostly including Yaqui land – to the Richardson Company from the USA. Rather unsurprisingly, this decision was met with widespread rejection by all eight Yaqui tribes and their governor, *General* Luis Matus, and his second in charge, Ignacio Mori. All of them blamed Obregón of enriching himself from the sales of their land. It is almost certain that this was also the primary reason for the Yaqui uprising.

3 Indirectly supporting not only the reports by Barker and Chalk, but also other media reports, on 14 September 1926, the United Press (UP) news agency reported that Obregón and his party were 'delayed' at Vicam station. Accordingly, the Yaqui were waiting for the train bringing Rivera and money and did not know that Obregón was on board. Correspondingly, Obregón was not molested but left on the train and there was no fighting either. The UP further reported that subsequently the Yaquis had burned down railway bridges, even if receiving a cheque for US$70,000.

4 Dabdoud, *Historia del Valle Yaqui*, p. 112.

5 In late 1928, after the Yaqui Rebellion, Carranza became the first pilot ever to make a non-stop flight from Mexico City to Washington D. C., to 'repay' Lindberg's flight to Mexico.

6 While Fierro's *escuadrilla* was working up in De la Misa, León invited them to a dance in his hometown of La Colorada. Cautious about roaming Yaquis, who were stealing cattle in the area, Fierro consulted an Army officer who recommended he travel accompanied by a heavily armed party. The commander of the *escuadrilla* followed this advice but he and his officers had barely arrived at the party when he received an urgent order from *Coronel* Juventino Espinosa. This officer was responsible for the protection of the MAS unit and demanded that everybody return De la Misa as soon as possible. Left with little choice, Fierro collected everybody and returned to the airfield.

7 Castro, J. J., *Radio in Revolution of Wireless Technology and State Power, 1897-1938*.

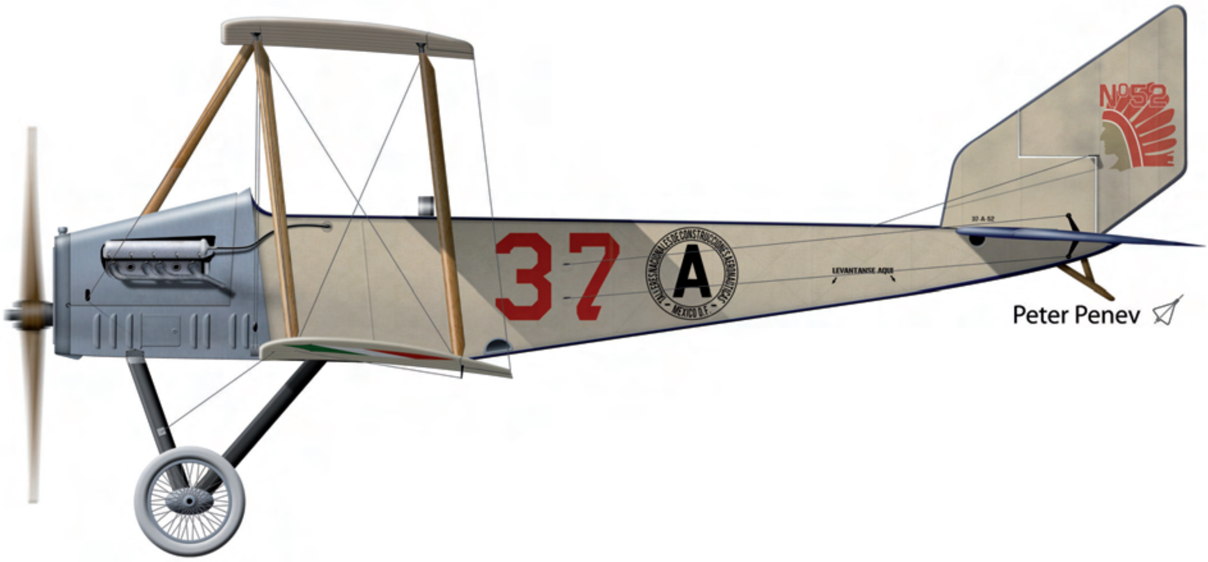
8 Executions of captured Yaquis seem to have been a tragic norm of this campaign. A newspaper article from 7 April 1927 detailed that 27 were shot to death at *General* Manzo's headquarters in Station Ortiz, while 300 – including many women and children – were deported via the Port of Manzanillo into exile in other parts of Mexico.

9 Interestingly, the Mexicans reacted significantly different this time: instead of arresting and jailing captured rebels, they promptly absorbed them into their army, forming a sapper battalion that was then redeployed to a different part of the country.

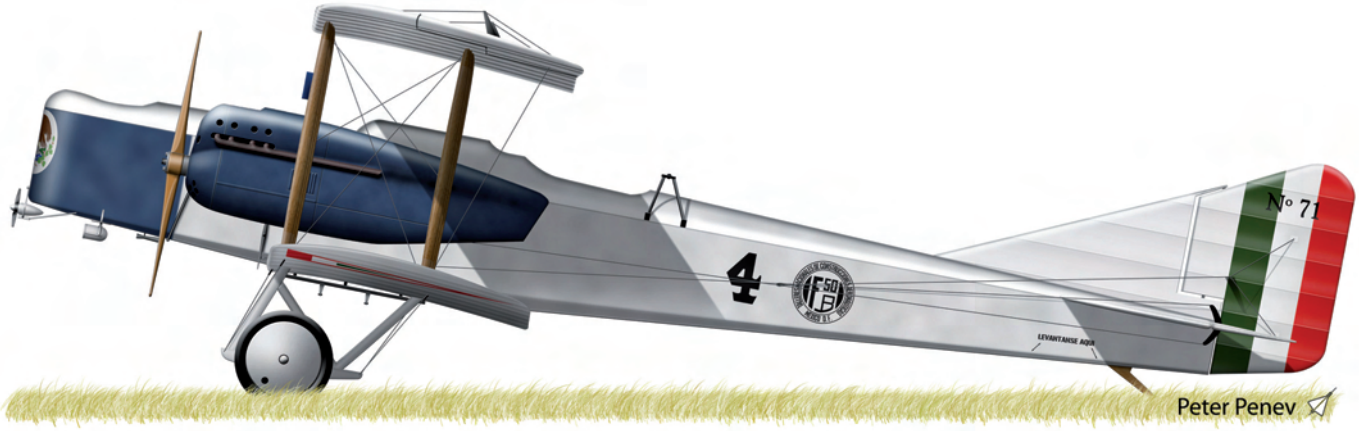
ABOUT THE AUTHORS

Manuel Reyna Garza is a Mexican military aviation researcher and former Staff Officer of the Mexican Air Force, where he served as a Historian and Director of the Military Aviation Museum. He has published a number of articles and participated in video documentaries about Mexican military aviation, contributing to the dissemination of the history of Mexican military aviation, as well as the preservation of its historical heritage. He has been decorated by the Chilean and Czech and Slovak governments for his work. This is his first book for Helion & Company Publishing.

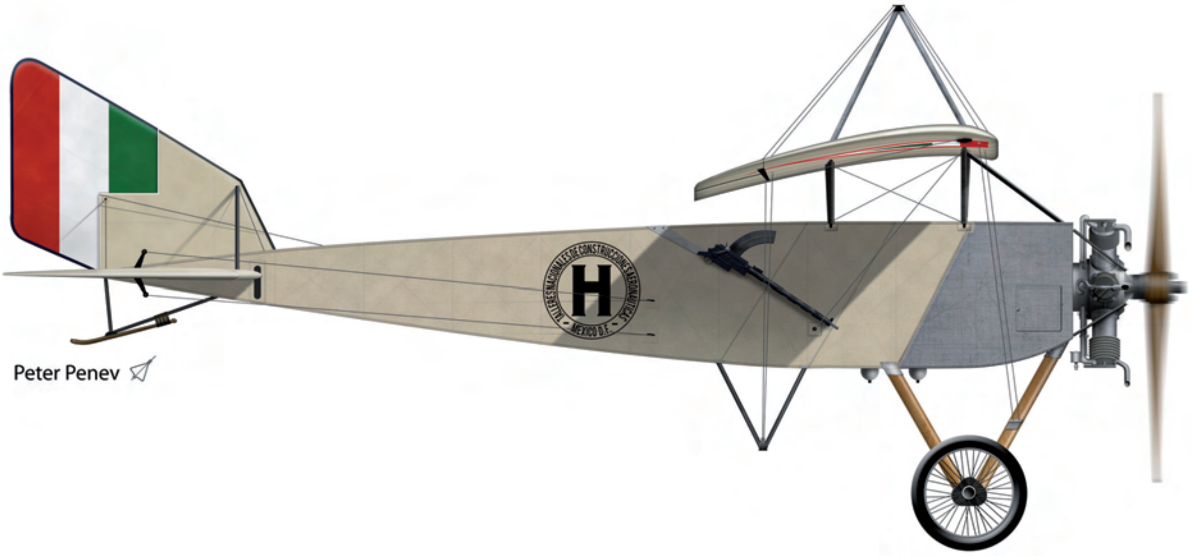
Santiago A Flores is a Mexican military aviation researcher, former US government employee and U.S. Army veteran, who served in Operation Desert Storm and later in support operations to Coalition forces in Afghanistan, Kuwait, and Qatar. He has published more than 220 articles about Mexican military aviation and other aviation subjects in hard print and in social media, has given conferences in the United States, Canada, and Mexico. He has been recognized for his efforts to expand knowledge of Mexican military aviation history by the commander of the Mexican Air Force in 2015 and received the Francisco Sarabia Conquistador de Cielo medal in Aeroexpo 1999. He has contributed to many books on military aviation in Mexico. He lives in San Diego California with his family. This is his second book for Helion and Company Publishing.



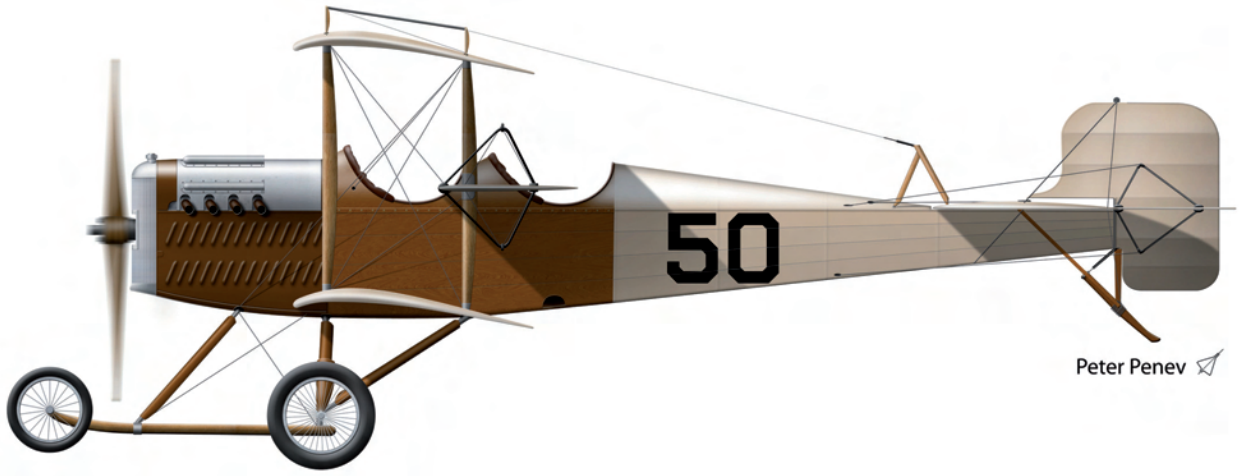
During the evacuation of Carranza's forces in May of 1920 to the Port of Veracruz, the air service organised air cover with two TNCA Serie A biplanes and one Farman F.50Bn2 bomber. One of the reported Serie As was 37-A-52, shown here while it was assigned to the northern part of the country in 1918–1919 and sported an Indian head insignia painted on its rudder. This aircraft was equipped with a Hispano Suiza 150hp engine imported from Spain. (Artwork by Peter Penev)



After May 1920, additional Farman bombers that had been ordered by the president's nephew, Alberto Salinas Carranza, were acquired from France. Example 4-F-71 carried the official Mexican Republic coat of arms painted on the nose. So far, no photographic proof has emerged showing these aircraft armed with bombs or machine guns. (Artwork by Peter Penev)



During the crisis with *Coronel* Cantu, governor of Baja California, an air unit was formed to fight against him. Among the aircraft gathered were some TNCA Serie H Parasol aircraft. This artwork is a reconstruction – based on fragmented information – of an armed Serie H with a Madsen machine gun, mounted on the side of the fuselage to fire downward, and locally made small bombs attached under fuselage. One of the aircraft was reported as being serial 4-H-56. (Artwork by Peter Penev)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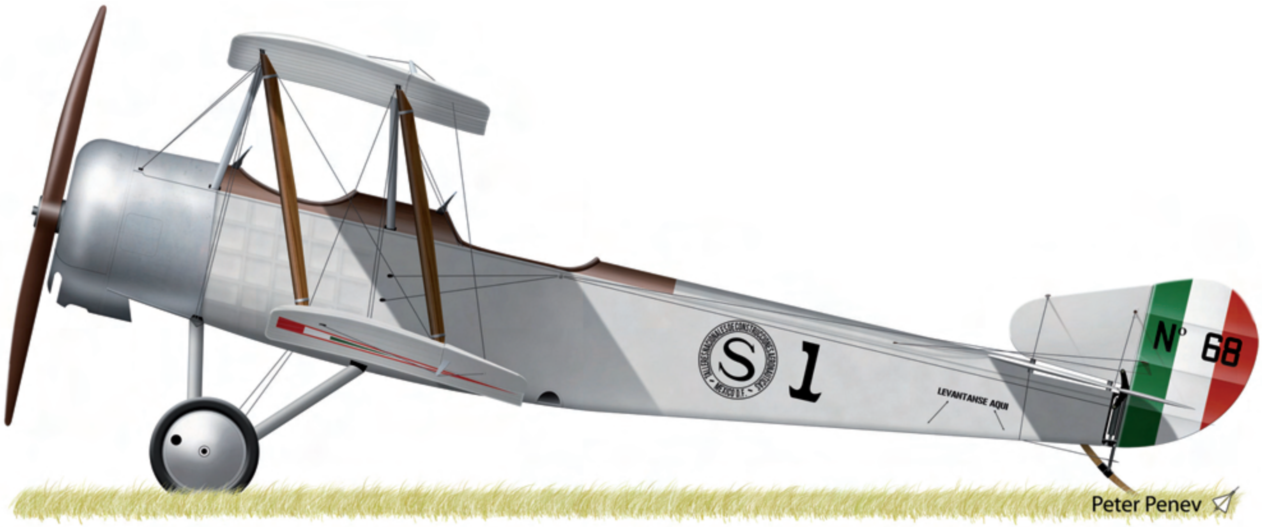
Peter Penev

One American aircraft that became indirectly involved in the Cantu Crisis, and was never involved in combat operations, was this Martin Model TT No.50 of the US Army Signal Corps stationed at what was then Rockwell Field (present-day NAS North Island), Coronado, California. A photo taken back in 1917 was used by the local American press to illustrate a rebel aircraft. (Artwork by Peter Penev)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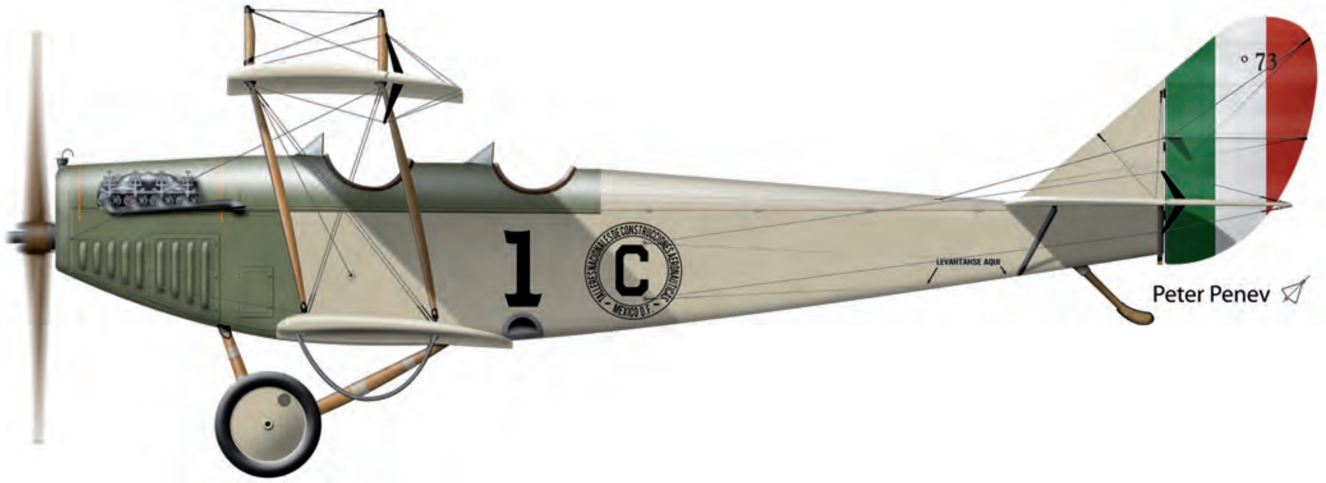
LEVANTANSE AQUI
Peter Penev

Another unique aircraft that was slated to fight Cantu was this Sopwith 1½ Strutter two-seater biplane. It remains unknown when it was bought and from what country it came (whether Canada or the United States), but it is certain that this aircraft was later allocated to the aviation school. It survived several accidents, and by 1924 was used a training aid at the school. (Artwork by Peter Penev)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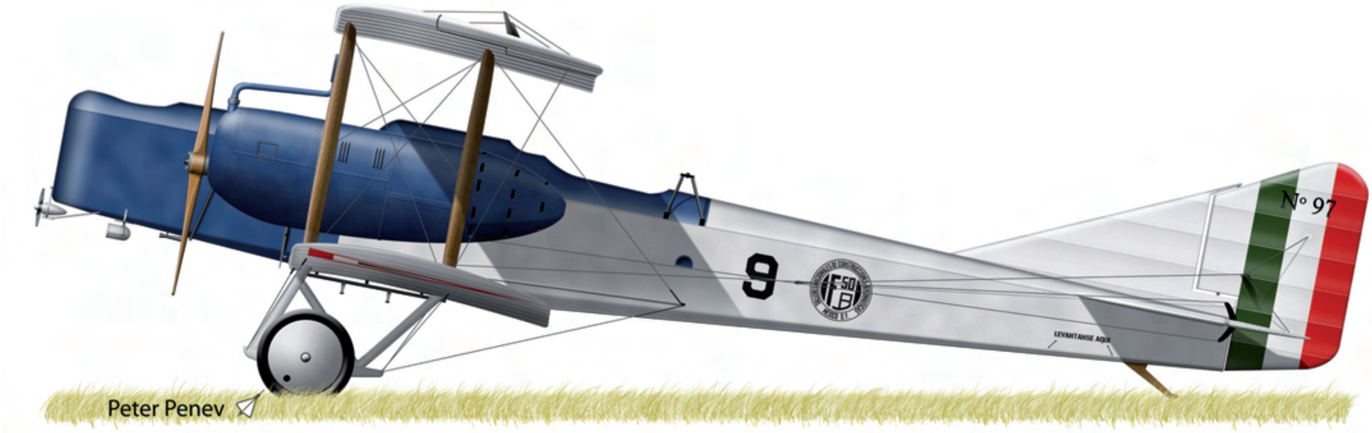
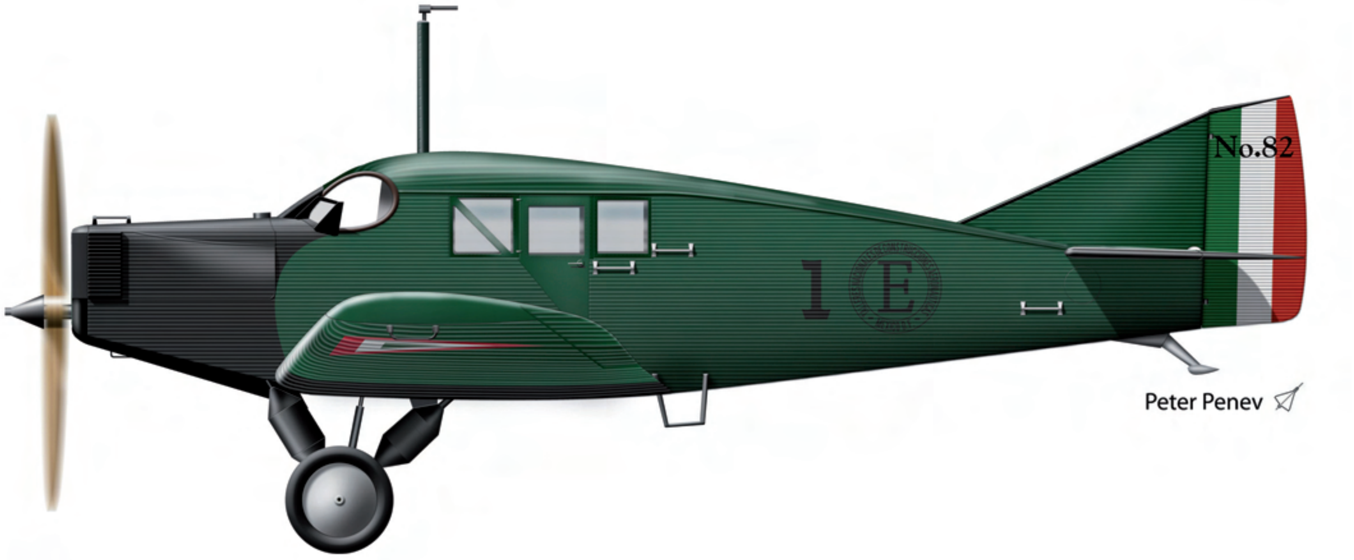
Peter Penev

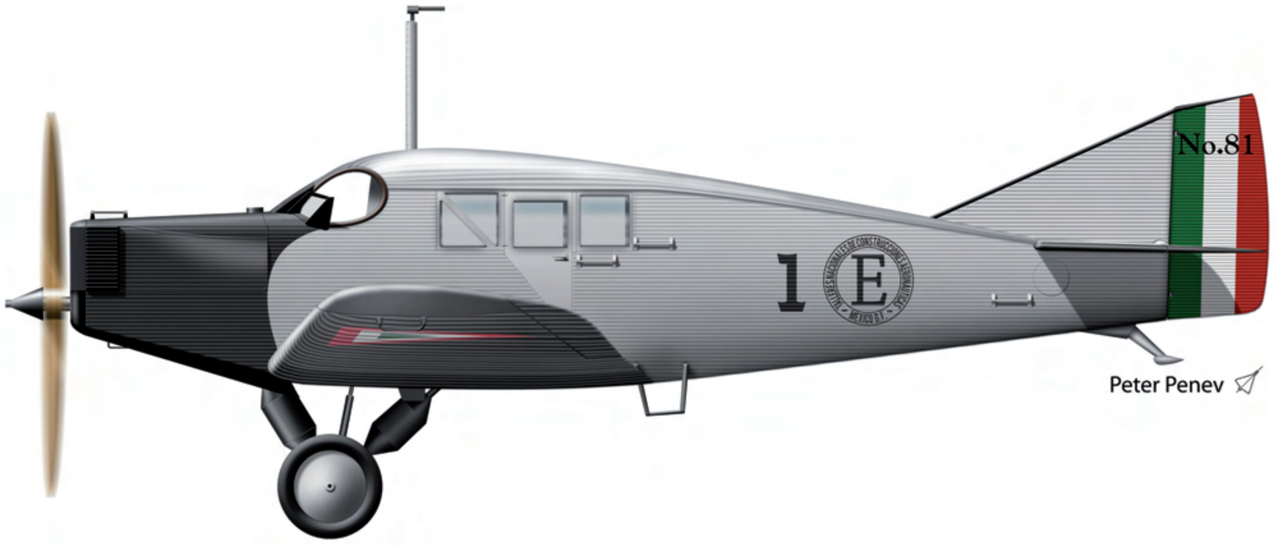
If there was any benefit from the Cantu Crisis, then it was that the Military Aviation Service inherited at least three Curtiss JN-4 Jennies that Cantu had bought from the civilian market in the United States. While the contemporary media labelled them as 'bombers', this example – serial number 1-C-73 – was used at the Military Aviation School as trainer and in some cases as observation aircraft. (Artwork by Peter Penev)



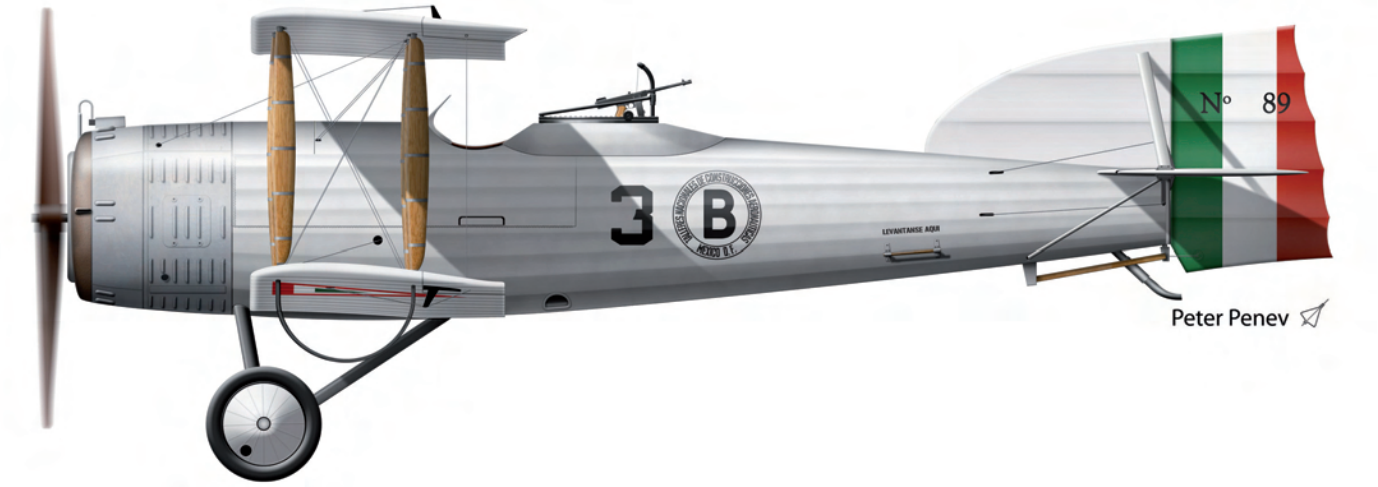
At the start of the De la Huerta Rebellion of December of 1923, the Military Aviation Service gathered all its available aircraft and among them were all the surviving Farman F.50Bn2s. Early on, they were used as bombers and later as transport aircraft. This example 9-F-97 was seen at Irapuato (*General* Obregón's HQ), right next to a few recently acquired DH.4Bs. (Artwork by Peter Penev)



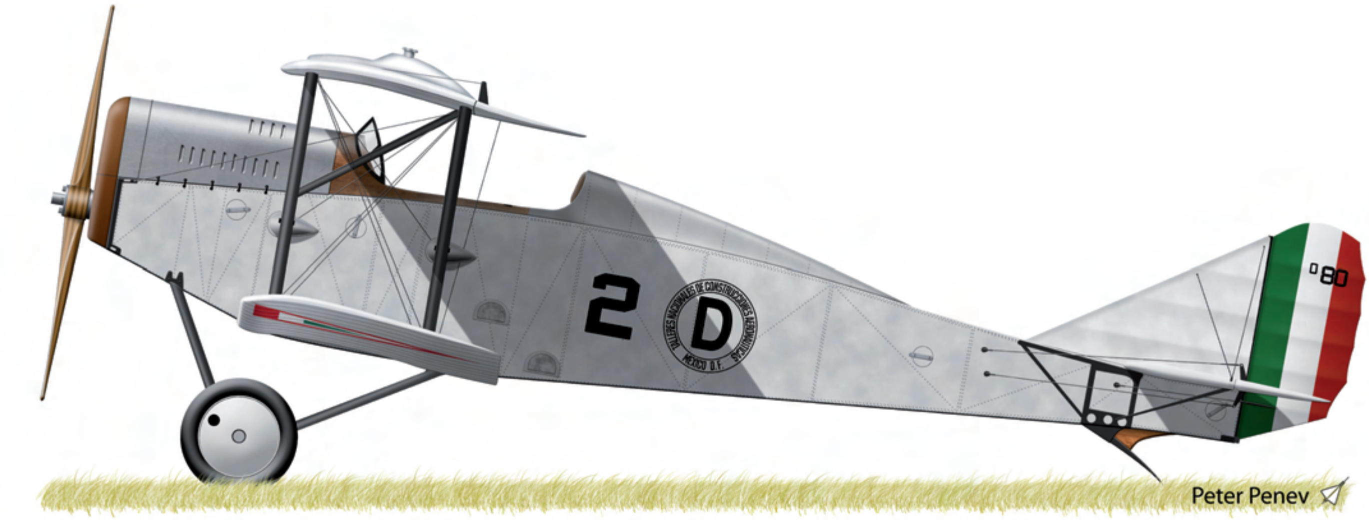
Among the aircraft deployed by the Federal forces during the De la Huerta Rebellion of 1923–24 were two Junkers-Larsen JL-6s that were used as bombers and reconnaissance aircraft. This example arrived in a dark green colour because it had previously served with the US Postal Service before being sold to Mexico by the Mercury Aviation Company and had the serial 2-E-82. (Artwork by Peter Penev)



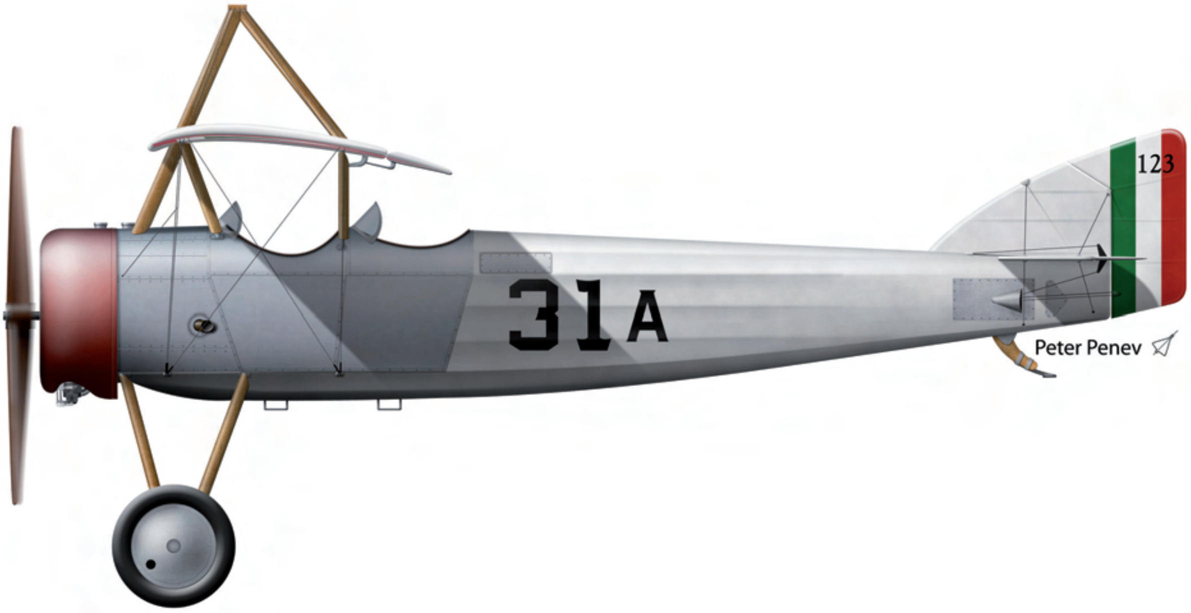
The other JL-6 colour scheme was silver overall. This example was bought by the Military Aviation Service. It was one of two JL-6s abandoned to the rebel forces and later destroyed during the Federal advance. The other landed in rebel territory due to mechanical issues, but the crew managed to destroy it before it could be used by the rebels. (Artwork by Peter Penev)



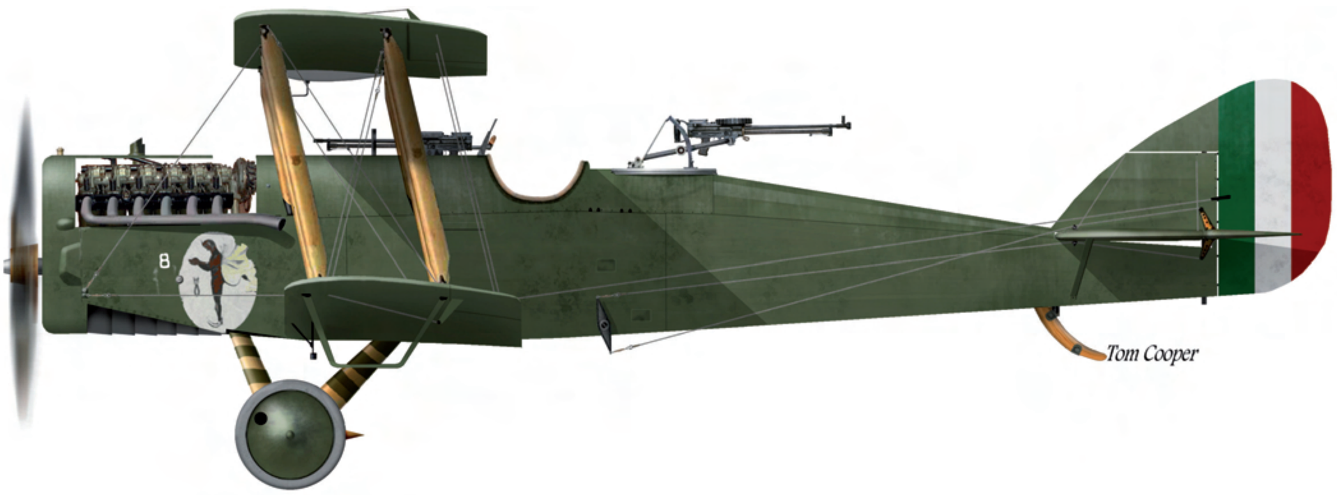
Among the locally-built aircraft used by the MAS during the De la Huerta Rebellion were the TNCA Serie B Puro biplanes equipped with imported French Salmson engines. About five were manufactured and they are known to have been armed with twin .45 calibre Thompson sub machine guns for the observer, but no bomb racks. After the arrival of the American built DH.4Bs, they were relegated to other theatres of operation. Reportedly, one was lost to rebel ground fire, but the crew survived and escaped. (Artwork by Peter Penev)



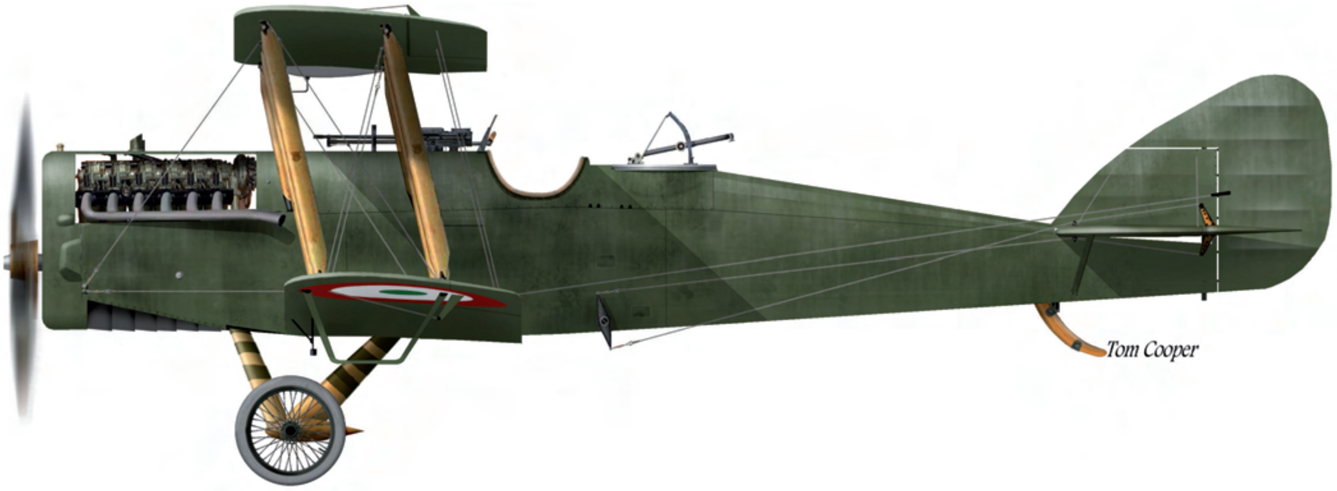
This Italian-made Ansaldo SVA.10 was bought by Francisco Santarini, chief of the aviation workshops, during his trip to Europe in 1919. During the start of the rebellion, it was deployed for reconnaissance purposes, until being written off in an accident about which no details are known other than that the crew was killed. (Artwork by Peter Penev)



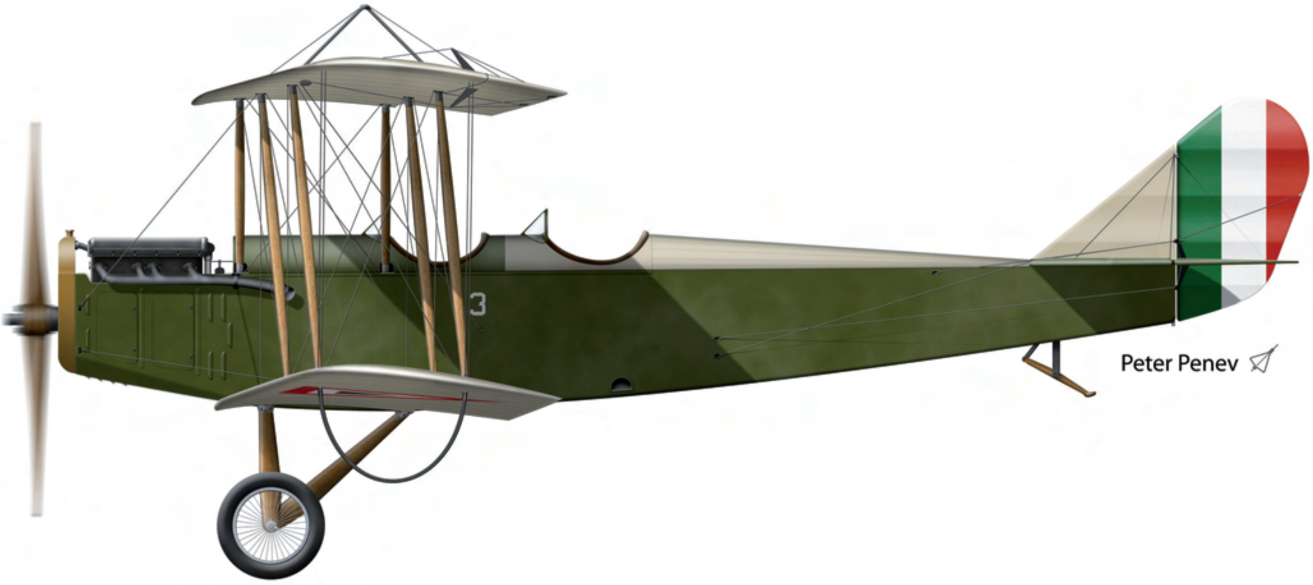
During Ralph O'Neill's tenure with the MAS, in 1922 Mexico acquired a total of 10 Morane-Saulnier MS.35C/Rs from a US representative. Only six appear to have actually entered service and they were primarily deployed as trainers and for reconnaissance, but also flew the first nocturnal bombing attack ever conducted by the service. This example, 31-A-123, was known to have been flown by Charles Lindbergh on 16 December 1927 in a series of flights carrying passengers. (Artwork by Peter Penev)



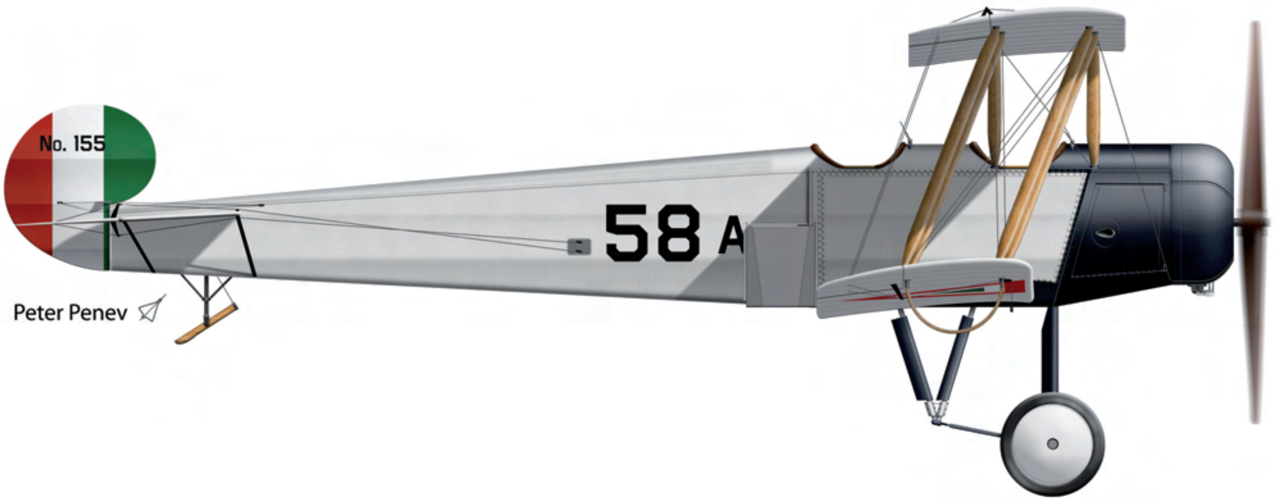
On the suggestion of the Mexican-American advisor Ralph O'Neill, a veteran of the First World War, the Obregón government ordered several Dayton Wright DH.4B combat aircraft. They are known to have been armed with frontal and rear guns, but there is no photographic evidence showing any bomb racks on these aircraft, and their role became that of 'strafers'. This example, No.8, had a winged devil dropping a bomb painted on the nose. This aircraft was used by Pablo L. Sidar and his gunner to attack the rebel shipping near Puerto México in 1924. (Artwork by Tom Cooper)



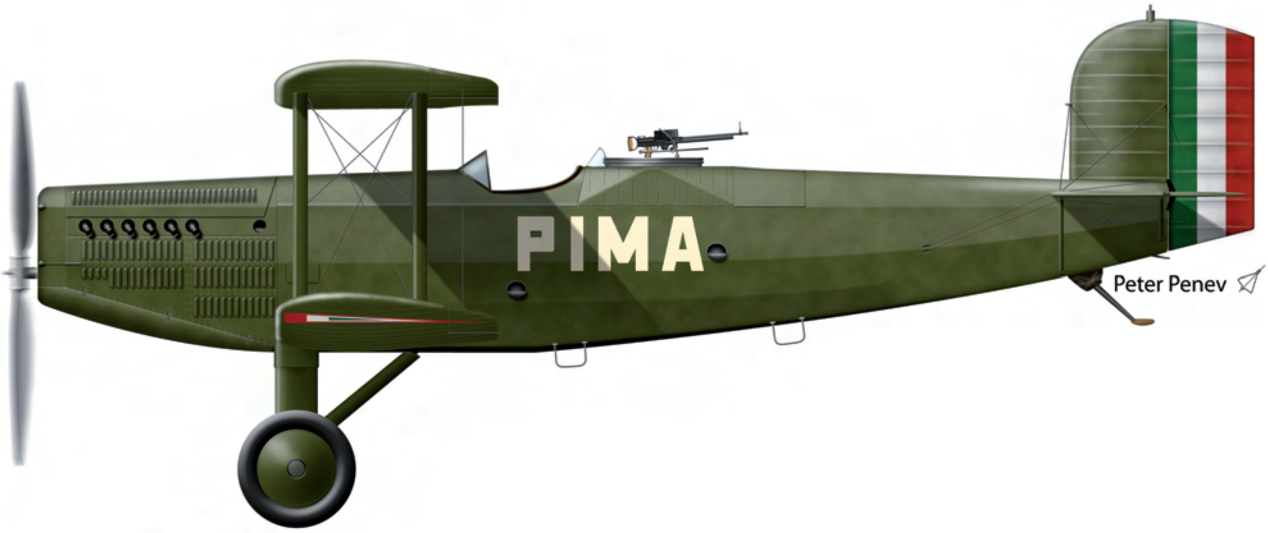
One of the first DH.4Bs known to have been assembled upon delivery to *General* Álvaro Obregón's headquarters during the De la Huerta Rebellion of 1923–1924, was this unidentified example. The DH.4Bs were fully armed, with the pilot and observer having Marlin and Lewis machine guns, respectively. Notable is the lack of bomb racks under the fuselage: this fact resulted in them being deployed as 'strafers.' If any bombs were dropped, then they were dropped by observers and by hand. Though not formally confirmed, some blurry photographs appear to show national insignia painted on the underside of the wings. (Artwork by Tom Cooper)



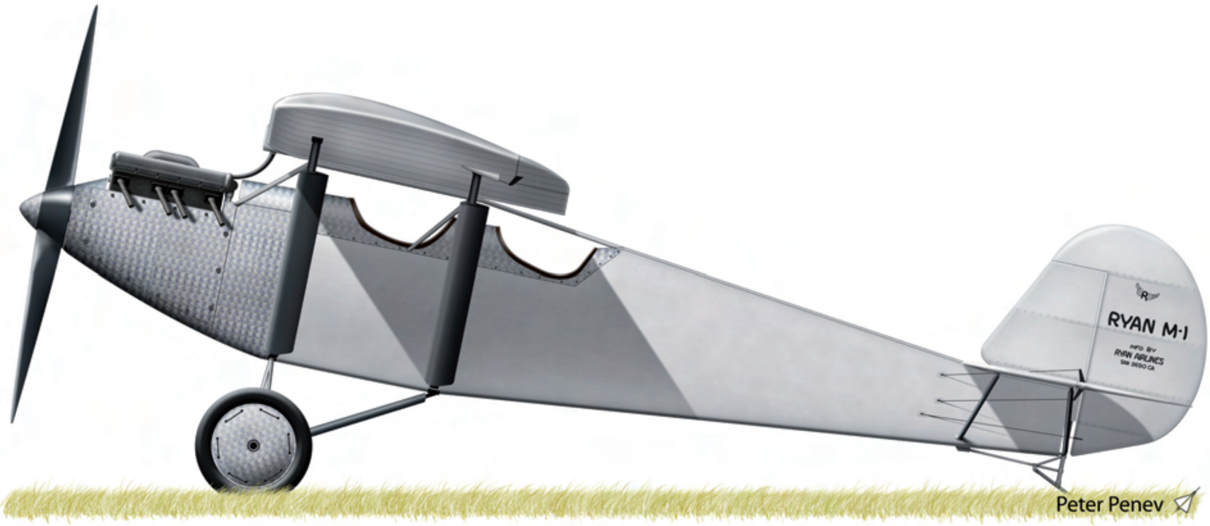
Another group of aircraft that were acquired during the De la Huerta Rebellion were the Lincoln Standard J-1s that were used for reconnaissance and transport flights, some transporting high-ranking Federal officers. Some aircraft were used in civilian aviation, and one was exported to El Salvador. (Artwork by Peter Penev)



Yet another group of aircraft operated by the MAS during the De la Huerta Rebellion were constructed by the aviation workshops to the British Avro 504K/J design. These trainers were acquired in 1921–1922 and designated the TNCA Anahuac, with the Mexican version having simplified landing gear. About 47 Mexican machines were built. These aircraft were not only used as trainers, but also for reconnaissance and as bombers. Some of the Avro Anahuacs were equipped with bomb rack boxes that could carry two bombs each and were used in operations against the Yaqui rebels. (Artwork by Peter Penev)

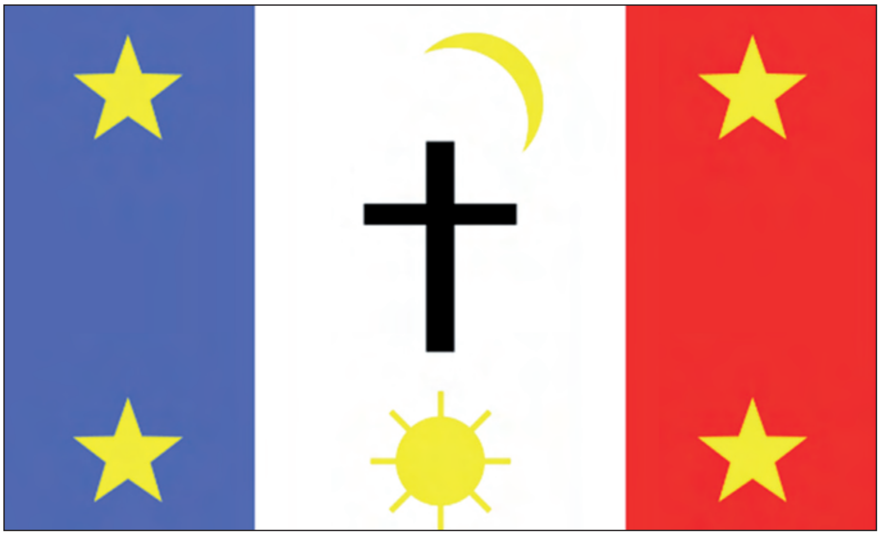


With the start of the Yaqui rebellion, and because the number of surviving DH.4Bs was reduced, the Military Aviation Service – with the help of *General* Abelardo L. Rodriguez – placed an order with Douglas for the O-2M model. Reportedly, four O-2Ms were used against the Yaqui Indians and had the names *PIMA*, *YAQUI*, *PUMA* and *MAYO* painted in white or light yellow on their sides. One was lost in operations. (Artwork by Peter Penev)

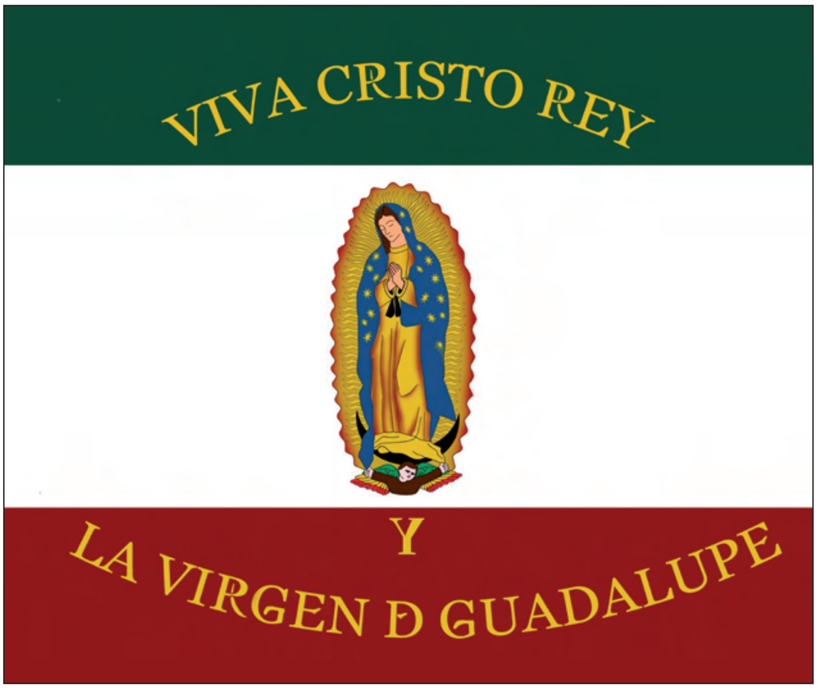


General Enrique Estrada plotted to return to Mexico and launch a rebellion against the Calles government. Since he had been on the receiving end of the Mexican Aviation Service and had learned the lessons, he recruited exiled pilots and ordered aircraft. These were four Ryan M-1 monoplanes built in San Diego and that were later successful with the air mail and small airlines. Estrada made his move though he was stopped and arrested in the USA before the four aircraft were completed. One was held for evidence in the trial of the rebels. (Artwork by Peter Penev)

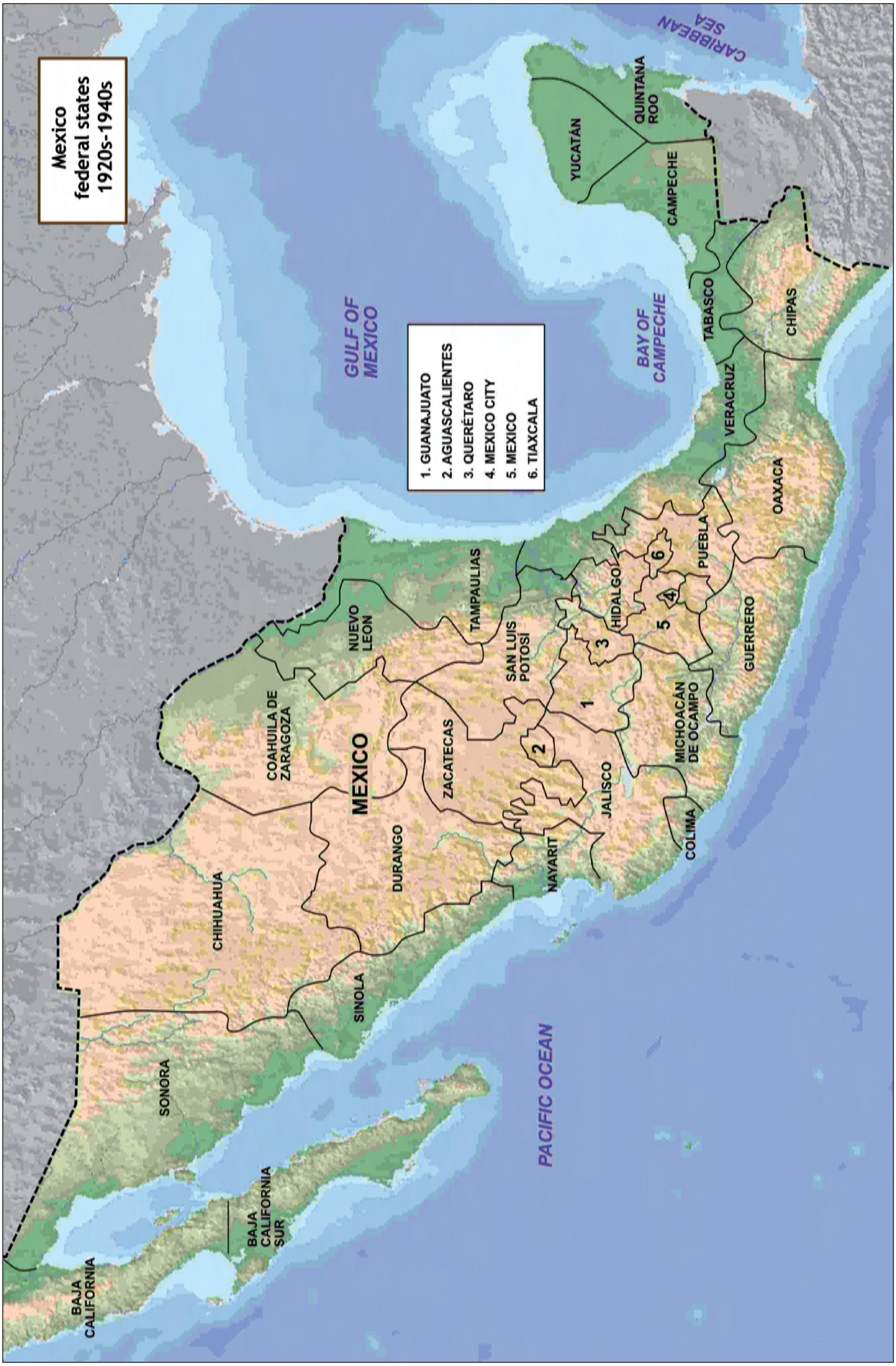
The statue of *Al Defensor de la Patria* (Defender of the Fatherland), located near the headquarters of the Ministry of National Defence in Mexico City. This was based on a Yaqui Indian who served in the Federal Army and as a bodyguard to President Lázaro Cárdenas. (Manuel Reyna-Garza Collection)



The Yaqui Indian flag. (Manuel Reyna-Garza)



A typical Cristero flag. (Tom Cooper)


Mexico federal states 1920s-1940s
1. GUANAJUATO
2. AGUASCALIENTES
3. QUERÉTARO
4. MEXICO CITY
5. MEXICO
6. TIAXCALA
GULF OF MEXICO
BAY OF CAMPECHE
CARIBBEAN SEA
PACIFIC OCEAN
MEXICO
BAJA CALIFORNIA
BAJA CALIFORNIA SUR
SONORA
CHIHUAHUA
COAHUILA DE ZARAGOZA
NUEVO LEON
TAMPAULIAS
SINOLA
DURANGO
ZACATECAS
SAN LUIS POTOSÍ
NAYARIT
JALISCO
COLIMA
MICHOACÁN DE OCAMPO
GUERRERO
HIDALGO
PUEBLA
VERACRUZ
OAXACA
TABASCO
CHIIPAS
CAMPECHE
YUCATÁN
QUINTANA ROO
1
2
3
4
5
6

(Map by Mark Thompson)

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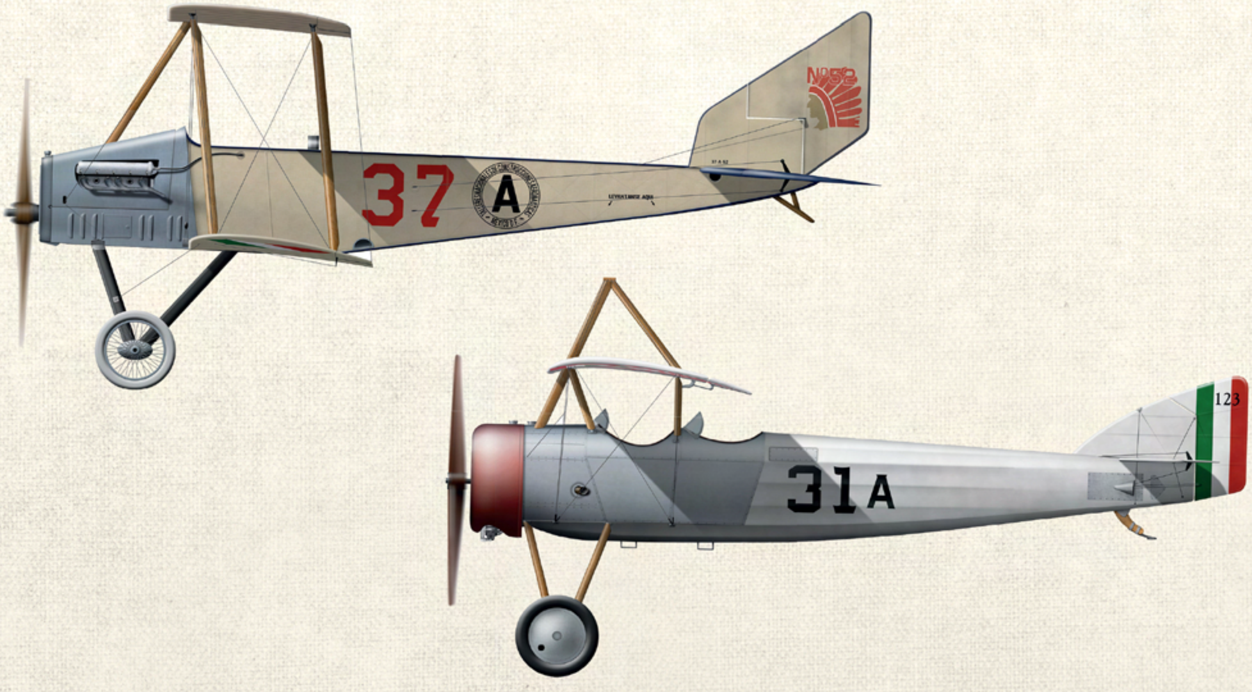

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